AIR FORCE MATERIEL COMMAND

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Force Protection

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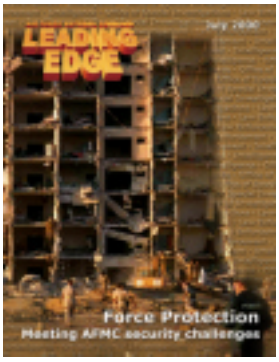
Cover Stories



Cover photo: Khobar Towers barracks, Dhahran, Saudi Arabia, following the June 1996 bombing that killed 19 U.S. airmen. Graphic design by 1st Lt. CK Keegan

Mission Progress

Features

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PRODUCT SUPPORT

Techical refreshment guarantees access to data

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — All 14,000 Air Force Joint Engineering Data Management Information and Control System, JEDMICS, users at five AFMC Air Logistics Centers have immediate access to over 16 million engineering drawings due to the newly refreshed storage capability.

The "tech" refreshment employs a magnetic disk, back-up storage strategy that enables engineering data stored at one site to be mirrored and stored at another site.

This "mirrored-redundancy" technique ensures that access to any drawing is guaranteed from any ALC site, even if that particular site's system is down, or it's data has been destroyed. In addition, the magnetic disk storage technology provides the Air Force with cheaper engineering data storage and faster data access than the former system capability did.

The enhanced system was put to the test and passed during a recently planned Tinker Air Force Base, Okla., JEDMICS system shutdown. JEDMICS data was still available to Tinker Single Managers and Data Management Teams by accessing the mirrored data residing at the Robins Air Force Base, Ga., site.

"This real-life scenario proved that no single manager would be without access to their data," said Mr. Tim Sierer, Air Force JEDMICS project lead.

The Air Force is the first service to migrate to and successfully test the mirrored-redundancy strategy as part of the program's contingency operations plan. Currently, the Air Force is developing an Internet-based, engineering data access strategy to supplement the private Defense Department networks used by Air Force JEDMICS users today.

— Wright-Patterson AFB report

New T-6 trainers arrive at Randolph

RANDOLPH AIR FORCE BASE, Texas — The Air Force and Navy accepted their newest aircraft during a flightline ceremony May 16, signifying the start of an eight to 10 year transition for the Air Force from the T-37 "Tweet" aircraft to the T-6A "Texan II."

The airframe will train entry-level Air Force and Navy aviation students.

During the transition, the Air Force will steadily replace the 38-year-old T-37s with T-6s at all Air Education Training Command Joint Specialized Undergraduate Pilot Training bases. The replacements will be conducted base-by-base, with squadrons changing their entire fleet at once instead of aircraft by aircraft.

The Air Force will receive 372 aircaft. An additional 29 T-6s will be used in the joint Air Force and Navy undergraduate navigator training program.

Advantages of the T-6A over the T-37 include quicker handling capabilities, better fuel economy and rapid maintenance turnaround. The new trainer has an expected service life of approximately 16,000 flying hours.

The JPATS/T-6A request for proposal was issued May 18, 1994, by the Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio. Some of the major requirements in the proposal were advanced ejection seats, increased bird-strike protection, electronic flight instrumentation and digital cockpit display, pressurized cockpit, increased oxygen capacity and cockpits to accommodate a larger range of individuals with different physical dimensions.

Source selection for the JPATS was completed in the summer of 1995. On June 22, Raytheon Aircraft Company was selected as the JPATS contractor. They were awarded the acquisition and support contracts Feb. 5, 1996.

The T-6A is the military trainer version of Raytheon's Beech/Pilatus PC-9 Mk II airplane.

— Randolph Air Force Base Public Affairs report

RESEARCH AND DEVELOPMENT

AFRL awards research contract to Alphatech Inc.

ROME, N.Y. — The Air Force Research Laboratory's Information Directorate has awarded a $1.5 million contract to Alphatech Inc. of Burlington, Mass., for research to improve the tracking of moving targets.

AFRL funding supports the two-year agreement, "Distributed Moving Target Information, DMTI, Fusion and Exploitation."

"Alphatech will develop software programs to process, analyze and exploit moving ground target information from a variety of sensors," said Capt. Robert A. Witham, program manager in the directorate's Information and Intelligence Exploitation Division. "We will be working on increasing the ability to exploit and track ground targets by incorporating different algorithms and software tools."

— Mr. Francis L. Crumb, AFRL Public Affairs

JSF undergoes wind tunnel testing

ARNOLD AIR FORCE BASE, Tenn. — The Lockheed Martin X-35 Joint Strike Fighter was tested in the 16-foot transonic Wind Tunnel during May. Arnold has tested both the Lockheed Martin and Boeing competitors for the Joint Strike Fighter.

Arnold has also been testing the JSF power plant variants being developed by Pratt & Whitney in the center's jet engine test cells. The JSF is planned to replace the F-16 and A-10 for the Air Force and early F/A-18s for the Navy and the AV-8A Harrier for the Marine Corps and the Royal Navy.

Several other countries are also interested in the joint strike fighter.

— Mr. Claude Morse, AEDC Public Affairs

Crime prevention

Leading the way in security forces

Col. Hubert Mitchell

The first element of any crime is opportunity. Security Forces officials at AFMC are trying to take away that opportunity.

"We want to move out and lead the way in force protection for the Air Force, becoming the envy of other commands," said Col. Hubert Mitchell, chief, AFMC Security Forces.

Leading edge technologies

One of the ways security forces have been successful at AFMC installations is to be as unpredictable as possible by constantly changing routines. "In the past many security procedures went unchanged for long periods of time," said Col. Mitchell. Those days are over.

A prime example of changing procedures occurred this past April when three individuals believed to be radical animal activists tried to gain access to Kelly Air Force Base, Texas. They were spotted near the area of the animal farm dressed in dark clothing and wearing ski masks and gloves.

An anti-terrorism funded lighting system surprised the intruders and caused them to depart without doing any physical damage to the installation.

Other leading-edge technologies, like the lighting system, AFMC has purchased for it's field units include Under Vehicle Inspection Units and Explosive Trace Detectors.

Unique challenges

Due to the very nature of its mission, AFMC has many unique security challenges that other major Air Force commands don't face.

"Being at the forefront of Air Force technology, we have to make sure that information security protection goes into our most critical areas," said Col. Mitchell. These areas include product, logistics and test centers, six Government Owned Contractor Operated plants and laboratories under the AFMC umbrella.

Contracted security forces are also a unique element in AFMC. Both the GOCO plants and Arnold Air Force Base, Tenn., employ these contractor security forces (see related story page 8).

"We also have acquisition security to deal with," said Col. Mitchell, "which gives us the opportunity to work in conjunction with security personnel employed by the labs."

"Information Security Protection is processed differently in this command than anywhere else in the Air Force because information security is applicable to the entire command," said Mr. Francis Cooper, deputy director, office of Security Forces.

"We provide direct support for technology control by having security professionals available to provide a single point for all security needs," said Mr. Cooper. "At the same time, we provide the general population all other information security services that you would normally see at any Air Force base in any other command.

"In addition to the unique challenges we face at AFMC, we have the same day-to-day security forces operations that you encounter at any other installation."

The Air Force mandated that all installations perform vulnerability assessments as part of their anti-terrorism program before the end of the year. These assessments identify weak areas around installations.

"We're well ahead of that goal," said Col. Mitchell. "Only three installations remain to be completed, placing us well ahead of other major commands."

Anti-terrorism

AFMC has three teams that deal with anti-terrorism: the Air Force Vulnerability Assessment team, Joint Staff Integration Liability Assessment Team and personnel on staff.

Security forces also provide security clearances for every employee at every installation.

"This is a preventative measure for commanders, so they know whether or not a person has a level of trust to gain access to a government system," said Mr. Cooper. "It's just one of a number of commander's management tools used to assess trustworthiness, based on a certain set of standards."

Force protection

Force Protection is a Department of Defense program designed to protect military personnel, civilian employees, family members, facilities and equipment in all locations and situations. This is accomplished through applying combat terrorism, physical security, operations security and personnel protective services, supported by intelligence, counterintelligence and other security programs.

AFMC security forces include gate guards, physical security, law enforcement personnel, information security and

K-9 operations.

"We have a mixed work force consisting of military officers, non-commissioned officers and civilians," said Col. Mitchell. "What they have in common is they are all security force professionals with special training and skills.

"Our law enforcement personnel are not like the police in the private sector, but do many of the same duties," said Col. Mitchell. "They have arrest authority for military personnel, can detain civilians and unique to this command, they can write magistrate tickets for speeding."

The K-9 operations include bomb dogs and drug dogs. (See related stories on Pages 12 and 13.)

Everyone's responsibility

Force protection belongs not only to security forces, but to everyone working, living on or visiting Air Force installations, stresses Col. Mitchell. "It belongs to the medical personnel giving anthrax shots, to the civil engineers constructing safer new buildings, to the casual observer who notices a package out-of-place."

How you can help

Being aware that terrorism doesn't have national boundaries and understanding what your responsibilities are, really go a long way in your protection, he said.

"Be aware of your surroundings," said Mr. Cooper, "and always follow instructions listed during threat condition alerts. Be aware of unfamiliar situations, and report them to security."

Finally, follow the instructions of those who are there to help you. "Always remember that our job is to protect and serve you," said Col. Mitchell.

— Ms. Libby VanHook, AFMC Public Affairs

1st Lt CK Keegan, AFMC

Airman David Atkins, a gate guard at Wright-Patterson Air Force Base, Ohio, is a critical part of the security forces package committed to protecting the base from terrorist activities.

Get me to my desk on time...

You sleep through the alarm, spill coffee on your new suit, and realize you're late for an important 8 a.m. meeting. Then you sit in line for what seems like hours at the gate while identification checks are made. Why, today of all days, does this happen to you?

"There is a purpose for checking identification at the gate," said Col. Hubert Mitchell, chief, AFMC Security Forces. "AFMC installations screen vehicles for people coming in who don't belong there, or in a worst case scenario, are bringing explosives in."

Under normal conditions, an identification, decal or temporary pass is all that's needed to gain access to AFMC installations. However, identification spot checks may be made during normal duty hours. After normal duty hours, everyone is checked for proper identification.

If there is a threat of possible terrorist activity or an specific incident warrants it, a terrorist threat condition, or ThreatCon, will go into effect and tighten entry procedures. A minimum number of gates may be open, everyone is required to show identification upon entry and vehicle searches could take place.

In an effort to reduce delays, many AFMC installations have special equipment for under-vehicle inspections, or use explosive trace detectors to enhance the capability to detect explosives.

You can help by always having your identification where you can get to it without delay.

"As threat conditions continue for long periods of time, don't become complacent or impatient," said Col. Mitchell. "The best advice I can give is to follow the instructions of those who are there to protect you."

— Ms. Libby VanHook, AFMC Public Affairs

Counterintelligence begins with you

His real name is Sanpual, but he is known as "Joe." He has an accent from the Georgia-Florida border, having grown up in a small town just south of Valdosta, Ga. Coworkers enjoy his humor and respect the hard work and dedication he shows at his job.

"Joe" likes his coworkers and appreciates the technology they provide for him and his homeland. He doesn't fault them for being fooled. After all, he was chosen for his intelligence and ability to sound American. If he can just wait a little longer, he will be able to get the plans for the new weapon system others in his office have been working on. "Joe" doesn't realize it, but the Office of Special Investigations (OSI) has been on his trail. They are just waiting for him to make a mistake. They need more evidence.

Counterintelligence's focus

Technology is gaining ground rapidly with the development of faster aircraft, better, more accurate weapons and technologies reaching into space. But with these advancements come the threats posed by foreign intelligence services trying gain superiority in battle or just trying to make money.

This is where OSI steps in with counterintelligence.

"The focus of counterintelligence is to conduct investigations, information collections and analysis of foreign intelligence threats," said Mr. Mel Cline, counterintelligence program manager. "What is trusted to us [OSI] by the Air Force is the detection and countering of intelligence collections, sabotage and terrorism directed at the Air Force."

Although "Joe" is just a fictitious character, there are numerous "Joes" out there trying to steal emerging Air Force technologies through illegal means.

AFMC's OSI has a program, nicknamed Seven Phoenix, chartered to provide counterintelligence support for these technologies. Counterintelligence, along with white-collar crime and criminal investigations are the three main focuses of AFMC OSI, according to Col. Ronald Kennedy, AFOSI, Region 1 commander.

"Through close coordination with other federal agencies and using numerous other means of collections, we identify entities who are trying to acquire information on Air Force technologies," said Mr. Cline. "Based on the information we develop through these methods, we initiate investigations and operations to counter these threats."

The investigations are always supporting a commander so he or she can make informed decisions. "When we conduct our investigation, we gather facts, make a written summary of the investigation and give the report to our commander to take action," said Mr. Cline.

But not all of counterintelligence is reactive. The main focus of counterintelligence is in educating the work force to look for warning signs before an incident occurs.

"We aren't necessarily running an investigation trying to catch a spy or foreign intelligence service person on a day-to-day basis," said Col. Kennedy. "We identify those technologies that AFMC is responsible for, identify where they are resident in the defense department and then educate workers on possible threats."

OSI organization

OSI is a separate operating agency reporting directly to the Air Force Inspector General. OSI Region 1 is aligned with AFMC and there are seven other regions that correlate with major commands.

"The primary reason OSI is organized along major-command lines is the unique missions each command has," said Col. Kennedy. "Overseas we have a heavy counterintelligence support to force protection. At AFMC bases, which are responsible for the research and development, procurement and support of the nation's weapons systems, we lean heavily on our procurement fraud investigations and Seven Phoenx technology protection efforts, which have the responsibility for procuring the nation's weapons."

There are also a number of OSI Region 1 detachments in major cities supporting the Defense Contract Management Command. These OSI units provide major procurement fraud investigatve services and counterintelligence support.

Other responsibilities

OSI also supports force protection in antiterrorism and vulnerability assessments.

"We assess one building or an entire installation and the vulnerabilities of that location to acts of terrorism," said Mr. Cline. "For instance, we might tell the commander that a known terrorist is working in the area, they have groups underground, they have this type of weaponry, they are known to use it, but they are more anti-government than anti-United States. The commander then decides what action, if any, to take.

"Capability and intention equals threat. You may have people capable, but they have no intention, so you don't have a threat."

OSI is a part of the terrorism Vulnerability Assessment Team, VAT, composed of Civil Engineering, Intelligence, and Explosive Ordnance Disposal and headed by security forces.

"If terrorists are working in an area and only capable of detonating a 50-pound bomb and everything on the base is concrete with no windows, chances are you aren't going to worry about that threat as much," said Mr. Cline. "It's the VAT's job to assess the threats for the commander."

The force protection responsibilities of OSI, counterintelligence and antiterrorism, are just one part where the average person, you, plays the largest part. Even in the middle of Ohio, "Joe" may be looking for that little piece of information you have to complete his mission. Always be alert and report suspicious activity.

— 1st Lt. CK Keegan, AFMC Public Affairs

The Counterintelligence mission counters the threat to Air Force security posed by hostile intelligence services and terrorist groups, and identifies and assesses the threat for Air Force commanders. AFOSI manages offensive and defensive activities to detect, counter and destroy the effectiveness of hostile intelligence services and terrorist groups that target the Air Force for espionage. This includes investigating espionage, terrorism, technology transfer and computer infiltration. The counterintelligence mission also includes providing personal protection to senior Air Force officers and other officials as well as supervising an extensive antiterrorism program in geographic areas of heightened terrorist activity.

AFMC Intelligence provides timely information

Once a terrorist, or anyone else with a grudge, shows up at the main gate with a bomb, it's too late to prepare.

This philosophy toward force protection is what drives Col. James Myers and the rest of the Air Force Materiel Command's Intelligence Directorate. The AFMC intelligence community provides commanders with an organized approach to collecting information.

That information comes from many different places and sources and in many different forms.

Supplying needed information

"In its simplest form, intelligence is providing people, commanders in particular, with the information needed, when it's needed in the form they can use," said Col. Myers, AFMC's intelligence director. "We can tell them what the enemy is doing now, what they are capable of doing and what they may do in the future so commanders can make more informed decisions to protect their people."

Col. Myers said the intelligence directorate works force protection and other issues hand-in-hand with security forces and the Air Force Office of Special Investigations and its field units. Each has an important role to play.

"We in 'intel' collect and analyze intelligence on foreign activities and sources; we don't collect intelligence on U.S. citizens," Col. Myers said.

World threats

Osama bin Ladin, a middle eastern terrorist believed to be hiding in Afghanistan, is a primary example of those who orchestrate terrorism that threatens the world and this country, according to Col. Myers. Bin Ladin has been linked to the World Trade Center bombing and other terrorist events around the globe, including bombings at U.S. embassies in Nairobi, Kenya and Tanzania. He is also believed to have conspired in the killings of American military personnel in Saudi Arabia and Somalia.

"We give 'intel' reports on various activities around the world to the OSI and security forces so they know what the threat is," Col. Myers said.

When that threat enters the United States, OSI people take over. They and the security forces folks provide the law enforcement arm of force protection.

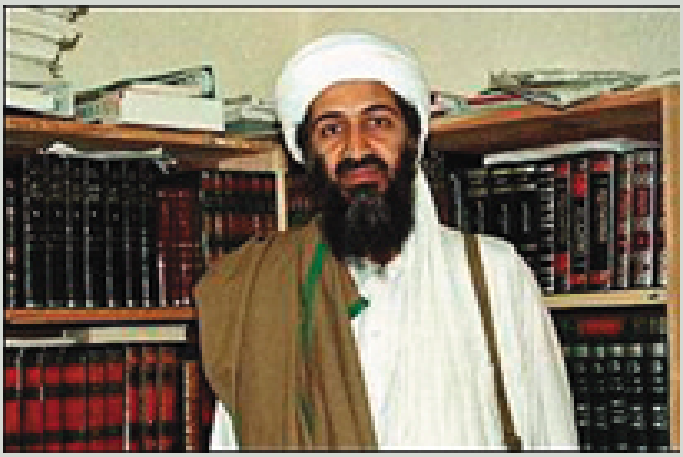
Being prepared

"In the next five years there is a good likelihood of a terrorist attack, and it could happen at a military installation," he said. "Our bases have to be prepared for this sort of thing, and we help by providing any information we get that something is coming."

Col. Myers said he and his intelligence collecting team are just as busy now as they are in time of war. The only difference is what they're focusing on.

"In the old USSR days, known as the Cold War, we focused on one target," he said. "Today we don't have just one, we have many.

"Some of our targets today are national and we can keep an eye on them. But others are not. Bin Ladin is not national, but he and others like him can have serious ramifications if not watched."



Osama bin Ladin: Still America's most wanted.

Terrorist events like the June 1996 Khobar Towers bombing in Saudi Arabia, where 19 airmen were killed and many more injured, and the October 1983 bombing at the Marine camp in Beirut, Lebanon, where 241 Marines died and 80 more were seriously wounded, provide the AFMC intelligence crew a constant reminder of how necessary their work is.

"We think of our work as similar to that of an aircraft mechanic," said Col. Rick Siebert, AFMC intelligence applications chief. "The mechanics train and try to predict things, but sometimes a series of events happen and there's an accident — it's the same with force protection."

"In the next five years there is a good likelihood of a terrorist attack... Our bases have got to be prepared..."

Learning lessons

"When something like Khobar Towers happens, we go back and look at what we could have done better," said Col. Myers. "We try very hard to be proactive and not allow anything to happen. But, it's action and reaction; if the terrorists happen to find a hole in our procedures, we'll fix it."

Force protection is just one part of the AFMC's Intelligence Directorate's mission. When not tracking terrorists and other "spy-type" people, they're doing their part to keep U.S. technology safe.

Analyzing information

"We collect and analyze information on the foreign weapons systems our U.S. systems could potentially face," said Col. Siebert. "We provide that information to our weapon systems program offices so they'll know what kind of capability our war fighters might face and what they'll need to compete and survive."

So whether it's keeping tabs on terrorists and other havoc wreakers in the world, or keeping U.S. weapon systems officials current on their opponent's capabilities, the intel directorate has a full plate.

"We live in a very open society and force protection is a very real issue," said Col. Myers. "Our bottom line is to provide information commanders need so they can take the action they need to protect their people."

Because, after all, once a terrorist, or anyone else with a grudge, shows up at the main gate with a bomb, it's too late to prepare.

— Staff Sgt. Carl Norman, AFMC Public Affairs

Arnold's contract security has low crime

With one of the lowest crime rates in Air Force Materiel Command, the people at Arnold Engineering Development Center, Arnold Air Force Base, Tenn. remained consistent in 1999. They stayed far below AFMC's established goal for all installations of no more than eight crimes per 1,000 population.

"AEDC's crime rate is well below the maximum goal, which is very good and reflects favorably on the entire AEDC community," said Mr. Joe Kirk, AEDC's chief of security forces.

Housing the world's most unique and diverse aerospace testing facilities, it should be no surprise that its security forces should be just as unique and diverse. They are employees of the center's support contractor ACS, a joint venture of Computer Sciences Corp., DynCorp and General Physics.

"All police officers are deputies of Coffee and Franklin counties in Tennessee," Chief Kirk said. "Our unit has the same basic responsibilities as any active duty security forces unit with the exception of mobility. We provide law enforcement, resources protection, and physical and industrial security for the installation."

Chief Kirk, a retired Air Force dhief master sergeant, said the contractor security police unit is comprised of former security police, military police, state troopers, Tennessee Bureau of Investigations officers, sheriffs, deputy sheriffs, chiefs of police and city police officers.

"This blend of varied backgrounds and individual expertise has resulted in a very professional unit," he said. "Since Arnold is under proprietary jurisdiction and all officers are sworn deputy sheriffs, we also enforce state laws on the installation and utilize the state court system as well as federal courts."

In April 2000, 21 traffic cases and one illegal weapons case were processed in the Tennessee State Judicial System.

AEDC Security Forces patrol the approximately 3,000-acre mission area inside a controlled-entry fence. Also, they are responsible for the nearly 37,000 acre area beyond the fences including a 3,000 acre lake. Most of this area is open to the public for hunting, fishing and outdoor recreation.

Mr. Butch Brooks, AEDC

Officer Jessie Simmons, a contractor security officer at Arnold Engineering Development Center, makes sure center employees comply with security measures the center has in place. Here he checks an identification badge for Maj. Kevin Vicek, AEDC's applied technology division, before allowing him to enter the main gate.

Master Sgt. Danny Rewis, Security Forces superintendent, said, "I have had the pleasure of working with the ACS Security Forces for the last three and a half years. Their unique blend of qualifications and extensive experience make them an invaluable asset to the center.

"I have been impressed the most by their personal commitment to the AEDC community, which I believe goes well beyond any contractual requirements or even the fundamental duty to serve. They are truly committed to providing high-quality, professional services, because they genuinely care."

> "This blend of varied backgrounds and individual expertise has resulted in a very professional unit."
> **Chief Kirk**

According to the chief, AEDC Security Forces has the reputation among civil agency counterparts and local district attorneys as being a highly professional police force with a very close working relationship.

"During a base anti-terrorism exercise, the local Coffee County Sheriff responded with his department's SWAT team for a combined response force," he said. "This is just one example of the relationship between AEDC and local police agencies.

"We also work extremely close with the local Air Force Office of Special Investigations Detachment 106, and conduct many joint investigations with them. Although there is a moratorium on outsourcing additional security, AEDC is an example that it works and works exceptionally well."

Arnold has used contract security forces since its beginning in 1951. ACS has provided that support since Oct. 1, 1995.

"In the early 1950s, there was a small contingent of active duty Air Police personnel who worked along with the contract force," Chief Kirk said. "However, this was short-lived. All security functions have been contracted since."

"I have had the pleasure of being a member of the AEDC Security Force since February 1981 and the Chief since November 1982," he said. "Needless to say, I am very proud of our unit's accomplishments."

— Ms. Dana Davis, AEDC Public Affairs

Foreign disclosure office protects technical info

Most people's idea of an export is a physical object shipped to another country. What many may not realize is that technical information is also considered an export.

"Under the International Traffic in Arms Regulation, the Department of State defines an export as information that is taken outside the country, and information that is released inside this country to foreign nationals," said Mr. David Benoy, chief of Aeronautical Systems Center's, Wright-Patterson Air Force Base, Ohio, foreign disclosure office.

Foreign visitors

Controlling the transfer of military information to foreign nationals on U.S. military installations is a joint effort between security forces and Air Force Materiel Command's 30 foreign disclosure offices. Security forces work with people on the base to safeguard the installation and its property, while workers at foreign disclosure offices control which foreign citizens may be issued visitors' passes.

When foreign nationals plan to visit an AFMC base, the approval process begins at their countries' embassies. Embassy people enter an official visit request into the defense department's Foreign Disclosure and Technical Information System, or FORDTIS, computer system. This links military foreign disclosure offices, the Pentagon, and foreign embassies in Washington.

Workers at local foreign disclosure office locations check daily for visit requests for their bases.

"We staff the visit request with the folks here who are going to host the visit, making sure they coordinate with building security and have escorts set up," Mr. Benoy said. "We ensure they know the visitors must have passes, which is a base security requirement."

"We send an electronic message through FORDTIS notifying the embassy when the visit is approved," said Ms. Aggie Sansone, foreign disclosure assistant. "We explain at what classification level the visit will be conducted, and military members are required to wear uniforms. We also send that information to the Pentagon."

Wright-Patterson usually has around 100 long-term foreign visitors assigned at any given time. More than 3,000 people from other countries make short visits to the installation.

Once on the Air Force base, "If they're here for a short visit, it's a base security regulation that all foreign national visitors will be escorted by a Department of Defense employee," she said.

Long-term visitors, usually foreign liaison officers on two- to three-year tours, have the same visit request requirements, but more freedom to move about the base.

"The permanently stationed foreign nationals have waiver of escort, with assigned areas — their working area and open areas — where they can go," Mr. Benoy said.

Although they enjoy many of the same privileges as assigned U.S. military members, these "permanent" visitors don't have unlimited access to information.

"The security officer briefs the folks in the hosting organization about what they can disclose," said Ms. Emily Evans, foreign disclosure specialist. "Everyone should be aware of the guidelines for releasing information to that person."

Foreign disclosure office people also review and approve (or disapprove) technical information DOD workers plan to give to citizens of other countries. Such information includes briefings given to foreign visitors to a base, letters or other materials to be mailed overseas and presentations given in other countries or at U.S. conferences to which foreign citizens are invited.

"Whether you're going out of the country or staying in the country, it still needs to be reviewed," Mr. Benoy said. "We handle 1,500 to 2,000 documents a year. AFMC handles about 50 percent of the international business for the Air Force, and offices at Wright-Patterson handle about half of AFMC's."

A few exceptions

Items that do not require foreign disclosure approval for release include "public domain" information, which has been published and is easily available.

Other exceptions: documents approved for public release by a public affairs officer, and non-technical information of a general or administrative nature.

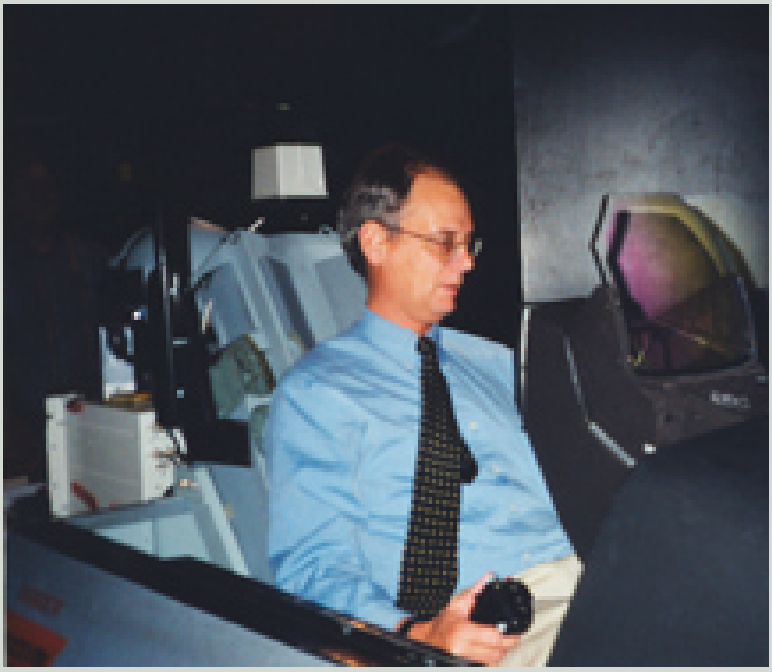
Air Force regulations require all official mail and packages sent overseas to be reviewed first by a foreign disclosure office.

"The people send it to us, with a note with their name and phone number," said Ms. Emilee George, foreign disclosure assistant. "We review it and send it out or give them a call if we have a problem."

"We don't just make up rules to inconvenience people," said Mr. George Mouzon, chief of AFMC's foreign disclosure office. "Our main concern is to support our war fighters and maintain our lead in war fighting technology."

"We don't want to put ourselves at an economic or military disadvantage by releasing sensitive technical information that could be reverse engineered and marketed around the world," said Mr. Benoy.

— Maj Ginger Jabour, AFMC Public Affairs



Dr. Simon Oldfield, research leader in simulations and human factors at Australia's Aeronautical and Maritime Research Laboratory, checks out the U.S. Air Force Research Laboratory's synthesized immersion research environment.

Anti-terrorism prevents attacks

Terrorism takes on many forms: the sinister car prowling the parking lot of an elementary school, waiting for an unguarded moment; gang members infiltrating the enlisted ranks of the armed forces to get training for criminal endeavors; gunmen going on rampages, targeting ethnic or religious groups. It's a dangerous world, but information is the best defense, said Staff Sgt. Jim Mogren, NCOIC of the antiterrorism section, 72nd Security Forces Squadron, Tinker Air Force Base, Okla.

"With the Cold War over, the dynamics of force protection have changed," he said. "We're susceptible to terrorist attacks by individuals against military and federal facilities. It's not only civilians overseas that are threatened by terrorists. There are groups in the United States, like militia groups, domestic terrorists and even gangs that present dangers to personnel."

Sgt. Mogren is responsible for Tinker's anti-terrorism program and ensures initial training for all base personnel. Under a directive from the Secretary of Defense, anti-terrorism awareness training is held annually with additional instruction offered for defense department personnel traveling overseas. The training is important, said Sgt. Mogren. By informing personnel of existing threats and how to respond to them, the terrorist threat can be minimized.

Sgt. Mogren said the anti-terrorism section acts when the military is targeted by any criminal organization — either foreign or domestic.

Oklahoma City residents created a makeshift memorial to the victims of the 1995 bombing of the Alfred P. Murrah Federal Building.

"Gangs are seen as terrorists because they are involved in gun and drug trafficking, affecting the base around us," he said. "We watch for gang activity because we don't want them learning from our training or recruiting new members from our ranks to further criminal acts. We respond to extremist groups the same way."

In 1995, military officials conducted thousands of interviews and written surveys, concluding that there was minimal evidence of extremist-group or gang activity in the armed forces, but remain alert for any manifestation.

Sgt. Mogren added that gang and militia awareness issues exist between anti-terrorism and crime prevention and compose only five percent of the anti-terrorism mission. In Oklahoma, there are more than 20 well-organized militia groups, but attacks are mostly verbal in nature and do not usually target military individuals. By keeping communication lines open with off-base and federal law enforcement agencies, any threat that surfaces can be dealt with.

"Weapons of mass destruction are a big topic right now," he said. "Because of the biological and chemical agents available [overseas] and scares that have happened [stateside], there has been a push to beef-up our anti-terrorism programs. Anyone can be a target, not just military or federal personnel."

The Oklahoma City bombing of 1995 spelled out to the world the worst of what a few determined individuals could do. Air Force officials stay in touch with civilian counterparts to share lessons learned and remedies for problems that arise.

"Training with simulated chemical spills helps us practice our anti-terrorism measures," he said. "Everyone is involved when establishing cordons, tracking response times and evacuations. Involvement with weapons of mass destruction scenarios involves these same elements. In the end, it's important for us to be reading off the same page."

There are two types of targets available to a terrorist: soft and hard. Soft targets are vulnerable and hard targets are fortified. Sgt. Mogren said one objective of force protection is to make soft targets hard.

"Terrorists will spend days, weeks or months determining if a target is soft or hard," he said. "We can identify suspicious individuals pretty quickly and show them we're aware of what's going on around us."

A car pulls up to the main gate and is stopped by the gate guard. The gate guard asks for identification, while a working dog sniffs around the car for the scent of explosives. The car is then pulled over to the side, its trunk searched, and the driver is then allowed to enter.

Controlling an entry point through random stops and searches may be an inconvenience to some, but he said it's an invaluable counter-terrorism security measure. When assessing vulnerabilities, every factor is taken into consideration. Even a building's proximity to parking can be an issue.

Most military and civilian employees are familiar with the tenets of operation security. As much as information can be used to deter a terrorist act, so too can it facilitate one. The number of meals served in a dining hall can denote troop strength and consumption of fuel can indicate the range of aircraft. These are pieces of a puzzle a terrorist can assemble.

"One of the biggest concerns we have is that people like to talk," he said. "Terrorist groups gather intelligence by asking questions. In a perfect world, personnel need to tell their supervisors when strangers ask questions relating to their jobs. Common sense will tell you when they cross the line into information gathering. It may be bothersome, but that information could help us out."

Anti-terrorism is a relatively new focus for civil and military agencies, and is not a war the military is used to fighting. The best weapon available is controlling the exchange of information. Sgt. Mogren said it works, but adds that every military service member and civilian employee can help win the battle. Chances of becoming a target are reduced when people become more aware of their environments.

— Mr. Andy Stevens, OC-ALC Public Affairs

AFMC's largest force is "not seen"

The largest Security Forces squadron in Air Force Materiel Command sits on Kirtland Air Force Base, N.M. The 377th Air Base Wing Security Forces Squadron has 350 people. Headed by Lt. Col. David E. Kenneally, the squadron's size is primarily because of the Kirtland Underground Munitions and Maintenance Storage Complex. But the base's size, with 51,000 acres of patrol area, seven controlled entry gates, 200 organizations and a regional correctional facility, demands a large security force.

"We take care of a lot of people and organizations assigned to the base," said Master Sgt. Peter Kraft, the aquadron's first sergeant. While most bases focus primarily on one mission, Kirtland has components of many commands. The squadron's mission includes 13-man teams deployed on a rotating basis to Southwest Asia and to areas such Mildenhall, England, where they guarded aircraft last year. Sgt. Kraft explained that, along with regular security functions, Kirtland keeps the necessary number of people working at the munitions storage complex. The complex is continually and fully staffed despite hour, day or holiday.

"Our cops are on duty 24 hours a day," Sgt. Kraft said, adding, "but the base community might not notice squadron members on a daily basis. When we're not seen, we're still there," he said.

Sgt. Kraft noted special events, like air shows, present additional demands beyond guarding the flightline or manning the entry gates. The annual fireworks show on the base brings as many as 150,000 people from the greater metropolitan area. No security forces officers move from the munitions complex during events.

Tech. Sgt. Glen Massman said Kirtland's security forces offer opportunities unique to the base because of its proximity to a metropolitan area. "It's a challenge for law enforcement guys because we get to learn more," Sgt. Massman said. The flight operations commander, 1st Lt. Chris Mercendetti, added, "There are situations you wouldn't normally get into at most bases."

Lt. Mercendetti said Albuquerque's crime comes right up to the base, stopping at the secured gates. Therefore, the squadron sees more violent crime than most bases.

The squadron is the first unit in Air Force history to receive the "outstanding" rating for the Limited Nuclear Surety Inspection, May 1999.

— Ms. Jennifer West, 377th ABW Public Affairs

Airman 1st Class Hallie Pell, Airmen 1st Class Thomas Gleason (by door) and Richard Rau (at gun) are members of the Kirtland Air Force Base, N.M., Security Forces Squadron.

Ms. Jennifer West, 377th ABW

AFMC provides Arnold crime-fighting partner

Picture an action-adventure movie where the hero blindly opens a suspect package or places his ear to a "ticking" box. Shift now to reality at Arnold Air Force Base, Tenn., where the security forces team has a new tool in the fight against terrorism called the Barringer Ionscan.

Air Force Materiel Command's security forces purchased the Barringer Ionscan for Arnold. Lt. Jim Hoots, security forces training and quality control officer, and Investigator Clay Thomas, spent three days training at Wright-Patterson Air Force Base, Ohio, on the uses of their new crime-fighting partner.

Chief Joe Kirk said the machine is useful during bomb threats and when Arnold receives suspicious packages.

"When we receive a call about a suspicious package, we are now able to determine the probability of explosives present and take the proper course of action," he said. "However, emergency procedures such as evacuations will be followed during the determination process."

Because the ionscan is not portable, when a call is received from any department on base, police officers dispatch to the location, use sterile swabs on the handler's hands and object, return to the police department and within minutes determine the contents of the suspected package.

Not only does the ionscan detect nitrates found in explosives; it also detects the presence of narcotics. Lt. Hoots noted the machine's detection sensitivity can reach .03 billionth of a gram. Alarms and red bars indicate the presence of nitrates or narcotics.

"If we had been fortunate enough to have the ionscan a year ago when a suspicious package was identified, we could have ruled out explosives, avoiding the lengthy evacuation that occurred," Lt. Hoots said.

Despite its accuracy in determining exactly what type of nitrate or narcotic is inside a package or envelope, the machine only determines probability. Lt. Hoots said it is the same concept as having a police dog to sniff packages.

"The reading we get tells us the possibility of the exact type of explosive present, not just residue," Lt. Hoots said.

Lt. Hoots said 120 airports nationwide use the ionscan as part of their security system.

— Ms. Dana Davis, AEDC Public Affairs

K-9 relationships effective in crime prevention

A circle of people surrounded two individuals fighting in base housing. Three security forces units had tried to break up the fight without success. They called for back-up and Tito arrived on scene with his handler Senior Airman Brett Easterday.

"Dog coming through," was the only thing the handler had to say. "The guys immediately threw their hands in the air in surrender and the fight broke up," said Airman Easterday. "No one's dumb enough to mess with a K-9, and if they are, they deserve to get bit."

Tito is an eight-year-old German Shepherd trained in illegal drug detection, but also carries the responsibility to guard his partner. He is one of seven K-9s, three drug and four bomb dogs, at Wright-Patterson Air Force Base, Ohio, and partner to Airman Easterday.

Partnership

As the saying goes, Rome was not built in a day, and neither is the relationship between a K-9 and a handler. It takes a couple of months for partners to get used to each other and for the handler to learn what his dog needs. The military has an added strain to the mix because handlers move or leave the force, and the dog remains behind.

"The dog grieves each time a new handler is assigned to that dog," said Tech. Sgt. Mark Brannon, kennel master at Wright-Patterson. "They form an emotional attachment. The former handler knew what that dog needed, how to praise the dog.

"Our job here is to make sure that needs to do his job. We are the supervisor, but also the servant to the dog."

The dog is the one who dictates what kind of reward it wants and what kind of praise he gets. Some are satisfied with a "good girl" and a scratch behind the ears. Others are motivated by food or a favorite toy. Sgt. Brannon says praise and reward are the dogs' paycheck.

Pairing up teams

A large part of Sgt. Brannon's job is to pair a dog with a handler so a bond is formed and he has the most effect team.

"I talk to a new airman to learn about their attitudes and goals. Then we pair them with a dog that matches their temperment," said Sgt. Brannon. "If you have someone sitting back in their chair, relaxed and thoughtful, they will need a laid-back and relaxed partner. A person who is hyper and can't sit down, then you need a hyper, younger dog."

Airman Easterday says he and his partner have many characteristics in common. Tito is loyal and friendly when he chooses, but can bring on the aggression when a job calls for it. They are both hard workers. Tito would rather work than play, and both have extra energy, which they work out together.

"He is my best friend and he's always there for me," said Airman Easterday. "I know what Tito's actions are going to be when I need him."

Senior Airman Eric Kilbourne and his partner Toska, an eight-year-old Dutch shepherd, are the opposite of Tito and Airman Easterday.

"I would use the word docile," said Airman Kilbourne. "We are both laid-back and friendly. But when Toska needs to be aggressive, she can turn it on quick. I think I am the same way."

Better than a pet

Sgt. Brannon said a partnership with a K-9 is more like a relationship and friendship — better than having a human partner. "A dog is totally loyal to you, adores you and is completely focused on you. So if someone grabs me, shakes me, or pushes me to the ground, my dog will come to my rescue. A human partner is not 100 percent focused on me, and may not be paying attention."

This relationship extends past normal duty hours. They are with their partners more than most people are with their pets, said Sgt. Brannon.

"The dogs are at the kennel only at night, otherwise they are out with their handlers. Many of the officers come in on their days off to take the dog for a walk, give them a bath or take them to their vet appointments."

Often a team on temporary duty will share a hotel room with double beds. It's not unusual for a dog to start out in a separate bed, and end up in bed with his partner before morning.

The relationship between a K-9 and handler has been proven effective. From the simple show of obedience during routine searches, to the dogs who have taken bullets for their partners, the K-9 units have become an important and valued part of security forces.

— 1st Lt CK Keegan, AFMC Public Affairs

Left: Not all of a K-9's job is to work, there has to be play time too. Here Senior Airman Brett Kilbourne and Toska take a break from their daily tasks. Top right: A K-9 must be agile and learn to obey commands. Toska demonstrates both by going through the tunnel on her handler's command. Bottom right: An important part of a K-9's duty is to protect the handler. Toska, a generally "docile" dog, turns on the heat when necessary. Photos by 1st Lt. CK Keegan

Training or playing, the K-9s think it's all a game

"From training to Frisbee catching, it's all fun for them."

The 66th Security Forces members at Hanscom Air Force Base, Mass., endure strenuous training, patrolling at all hours and being prepared for deployment at any time.

So what are the benefits to such a demanding job? How about some Frisbee catching or rawhide chewing?

Robby, Rex, Ringo, Dingo, Rocco and Jordy are the six military working dogs stationed at Hanscom's 10-year-old K-9 unit.

The four Belgium malinois, one Dutch shepherd and one German shepherd all began their military careers in similar fashion.

Government contractors buy groups of 10 to 15 dogs and then train them to the minimum standards accepted by the Air Force. The potential recruit must be able to sit, stay, have no fear of gunfire and be able to sense anise (an herb with a neutral odor), said Staff Sgt. David Kurutz, working dogs kennel master.

The qualified dogs, averaging usually one year old, then go to a technical school where they are in-processed and begin their training.

Dogs earn their "3-level" by learning a specialty as either a drug or explosive detector, or by learning their own "rules of engagement" and basic attack skills.

"The trainers take the dogs' natural instincts and funnel it where it needs to go," said Sgt. Kurutz.

The dogs train on several scenarios such as finding lost people, hidden suspects or sensing suspicious packages.

The length of their schooling is determined solely by how fast the dog can retain knowledge, said Sgt. Kurutz. This can take anywhere from one to seven months.

The dogs must be able to perform the six phases of attack with no errors, or be flawless in detection exercises in order to graduate and receive a patrol certification.

At its first duty station, the dog will be assigned a handler, completing a two-member team that will not be separated until the handler has to leave Hanscom.

The dogs are a vital part of search and detection, explained Sgt. Kurutz. Five people searching a small building for drugs would take about three hours; a dog could do it in 15 minutes.

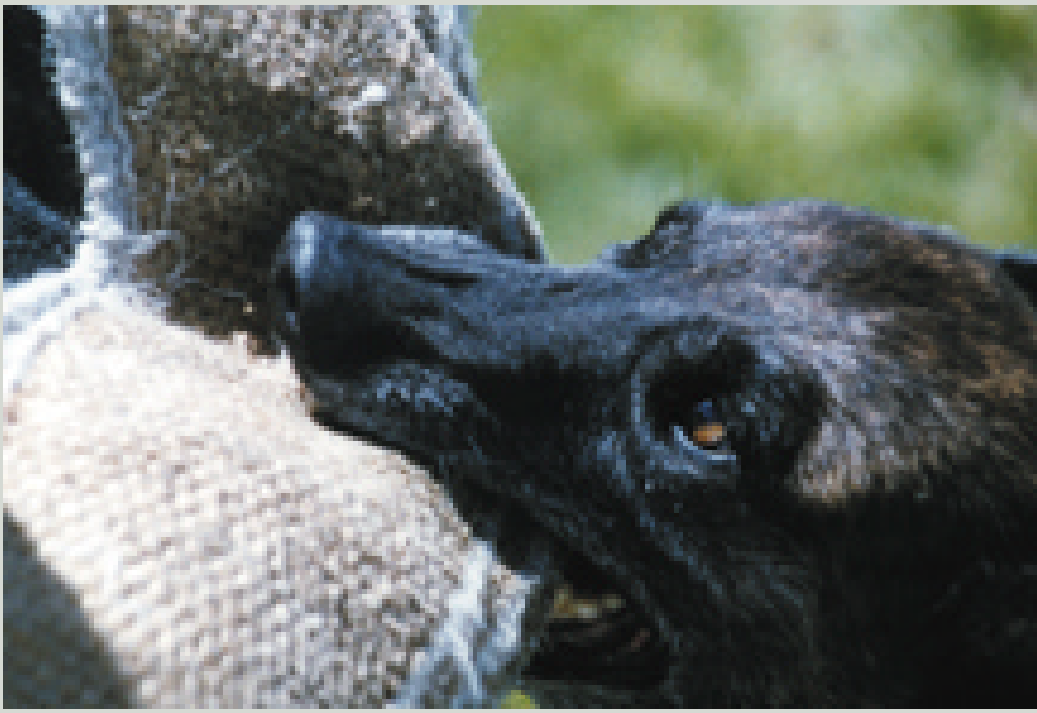
These skills are not always used for narcotics and explosive retrieval. Robby earned a certificate of appreciation from a local community where he found a missing child lost in the snow. The dogs will also go on temporary duty with their handlers from anywhere in the New England area, including New York state and Washington, to places overseas.

The canine cops have already completed 31 missions this year. Currently there is one on temperary duty in Kuwait.

Despite all of the training and patrolling, the dogs do get plenty of playtime as well.

Their handlers can choose from an assortment of dog toys piled in a desk drawer at the kennel, or take them to the obstacle yard. Sgt. Kurutz said he can see the enjoyment the dogs get out of everything. "From training to Frisbee-catching, it's all a game to them."

— Airman 1st Class Theresa Ide, ESC Public Affairs



One-of-a-kind AF 'force protection' teams at Brooks ready for quick global response

When the National Command Authority notified the Air Force Radiation Assessment Teams, AFRAT, at Brooks Air Force Base, Texas, to stand by last fall to help the Japanese following that nation's worst nuclear radiation incidents, team members prepared to deploy as part of their rapid global response to capability.

While AFRAT is often called to assist other nations with radiation incidents, the Air Force organization's primary mission is protecting U.S. forces. Since the defense department established AFRAT in the 1950s in the wake of a nuclear weapons incident in Spain, this Air Force asset has responded to numerous emergencies, providing health physics and radioanalytical support primarily to American military forces.

"We have the smallest footprint [in the Air Force]. We're very mobile," said Lt. Col. Randall Scott, AFRAT commander. He said that AFRAT provides on-scene commanders with a great amount of information to help remediate radiation incidents.

Headquartered at Brooks, AFRAT is part of the Air Force Institute for Environment, Safety and Occupational Health Risk Analysis, AFIERA, and is designed as a task force organized based upon contingency need. Teams range in size from two to 37 members.

Dr. Dave Erwin, AFIERA director, said AFRAT implements the Expeditionary Aerospace Force concept: "Being a small mobile force, but having a big impact."

AFRAT is composed of four specialized teams. The Radioanalytical Assessment Team, RAT, measures, analyzes and interprets environmental and occupational radioactivity in soil, air and water. Two Nuclear Incident Response Force, NIRF, teams focus primarily on nuclear weapons incidents and potential terrorist acts involving weapons of mass destruction. Recently, AFRAT added the FLARE (Field Laboratory for Assessing Radiation Exposure) team to its growing capabilities.

"FLARE is the only Department of Defense lab accredited by the Department of Commerce's National Institute of Standards and Technology as a field deployable lab for assessing radiation exposure," says Mr. Bruce Dicey, chief of the Air Force Radiation Dosimetry Program.

An AFRAT team member dons a radiation protection suit in preparation for a trip to Japan.

FLARE is one asset that would have been invaluable during the Japanese remediation efforts to contain an out-of-control chain reaction at a fuel fabrication plant in Tokaimura. "We deploy with 5,000 to 10,000 dosimeters. Our design capability is to monitor 1,000 people per day for radiation exposure," said Mr. Dicey.

Fortunately, the Japanese were capable of controlling the contamination that directly affected 40 plant workers and caused the evacuation of 300,000 civilians living in the affected area. The New York Times reported the Japanese Atomic Energy Research Institute's initial monitoring at the plant indicated radiation measurements had been between 10,000 to 20,000 times above normal levels.

If FLARE had deployed to Japan, lab members would have issued dosimeters to radiation exposed people who'd wear them for a day or longer. The dosimeters measure x-rays, beta, gamma and neutron radiation. Those affected in Japan were exposed to neutron and gamma radiation.

FLARE is also licensed by the Nuclear Regulatory Commission, NRC, through the Air Force's master material license, to deploy its assets anywhere worldwide consistent with status of forces agreements.

"AFRAT is the only one (organization) of its type in the nation that possesses the full spectrum of radiation response capabilities (under one roof)," Mr. Dicey noted.

These capabilities include external dosimetry that evaluates radiation doses from sources outside the body; internal dosimetry that evaluates radiation doses due to radioactive material deposited inside the body through inhalation or ingestion of food or water contaminated by radioactive material; health physics that focuses on occupational and environmental radiation safety; radioactive waste management and disposal; and emergency civil and military assistance.

The last major civil international incident in which AFRAT deployed teams involved the April 1986 Chernobyl nuclear power plant accident in the former Soviet Ukraine. AFRAT teams deployed to Europe and Asia to monitor potential radiation fallout caused by the Chernobyl accident.

More important to the Air Force is that AFRAT fits well within the EAF structure due to its team size and high mobility capability. AFRAT fulfills what Air Force Chief of Staff Gen. Michael E. Ryan said, "A major part of being able to effectively execute the EAF concept is to reduce our forward footprint, while connecting our forces to needed information and warfighting capability in rear areas. We're already implementing what we term 'reach back,' and experimenting with light and lean aspects of an expeditionary force."

— Mr. Rudy Purificato, 3llth HSW Public Affairs

Hanscom develops high-tech security equipment

Need something secured? Put a cop on it. There was a time in the Air Force when that was the common answer to just about every security need. There were horse patrols on the perimeter of Clark Air Base in the Philippines, military working dog teams walking around the alert bomber force and the beloved "camper crews," two-man teams who patrolled the vast missile fields.

But that was then, and today the luxury of a well-manned force is gone.

High-tech command

Today, at Hanscom Air Force Base, Mass., those same cops are operating Electronic Systems Center's high-tech command and control display panels, monitoring a suite of intrusion detection sensors, thermal imagers and cameras at the control of their fingertips.

"These are technical tools designed to give our security forces the extra eyes and ears needed to protect the force," said Capt. Ken Butler, force protection systems program office. "They are force enhancers."

The force protection SPO is the Air Force's lead agency to develop and acquire physical security systems.

"We get tasked to support high value assets, both 'hardware' [such as weapon systems] and 'software' [people]," said Mr. Jeff Thurston, deputy program director.

The office works with the Air Force Security Forces Center, Lackland Air Force Base, Texas, which sets the requirements for security products and guides the office into areas that need support.

Modeling and simulation

Many ideas originate at the Air Force Force Protection Battlelab, also located at Lackland. The battlelab is basically a think tank that uses modeling and simulation to measure the potential of innovative concepts, including the next generation of technology, to improve the protection of Air Force personnel, facilities and weapon systems.

Once the planning stage is over, it's up to the SPO to turn concepts and drawings into real products.

The main way to do this is to scour the huge commercial security industry for products. By purchasing existing products from commercial sources, the Air Force saves money in research and development costs.

"A lot of times our requirements are more stringent," said Mr. Thurston, "but we work with vendors to help them understand and ultimately meet our requirements."

Success story

One product that grew from this process is the Tactical Automated Security System, TASS. This is a deployable system using sensors, thermal imagers, alarm monitors and data communications links to form a continuous electronic security envelope around critical resources.

A major success story, this ESC-developed product played a prominent role in protecting American forces during recent conflicts in Albania and Bosnia. It has been adopted throughout the Department of Defense and is now being used around the world.

There is one example where TASS is being used to protect a portion of a civilian airport used as a troop processing point. Without this system, thousands of lives would be at a much greater risk of terrorist attack, said Capt. Butler.

An installer aligns a Tactical Automated Security System microwave sensor in Southwest Asia.

The office also acquired the Weapons Storage and Security System, which secures high-value weapon systems in underground vaults, and the Advanced Entry Control System, using magnetic card readers, pin pads and biometrics to ensure positive entry controls into secure environments.

Product testing

After products have been identified, they go through rigorous testing at ESC's Site C-3, a mock base built at Eglin Air Force Base, Fla.

To act as another step in the evaluation process, the office employs eight career security forces personnel to work alongside acquisition people and give real-time feedback based on their field experiences. Mr. Lou Stamas, information manager for the office, credits this relationship with the high level of success of the office's programs.

The office has also drawn on the operational expertise of Hanscom's 66th Security Forces Squadron, most recently during the development of a prototype situational awareness tool for security forces commanders. Once deployed, the office's work with a particular product does not end.

"There are active upgrades going on to incorporate cutting-edge technology to enhance our products," said Mr. Thurston, "such as adding a video motion detection capability to TASS."

Planning for the upgrade of another office product by the United States Air Forces in Europe Flightline Security Enhancement program, is currently underway.

The system combines a thermal imager and camera on a pan, tilt and zoom mount high atop a tower to give one individual almost 360-degree surveillance of flight line areas. The upgrade project will link the system to a sensor field so when an alarm activates, the camera will automatically zoom in on the area.

"That way anyone attempting to approach the area would be detected and immediately assessed," said Mr. Thurston. At that point, a response force is directed to the scene to intercept the intruder before he or she can reach their objective.

The office provides post-deployment logistical support through the Cryptologic Systems Group, an ESC geographically separated unit at Kelly Air Force Base, Texas.

Although the ultimate results are the same, the Air Force has come a long way from the days when there was a cop on every 50 feet of fence.

— Master Sgt. Daryl Mayer, ESC Public Affairs

Seeing spots

Children get prints for security

They filed out in twos, offering their tiny fingers for an exercise in "finger painting."

The 72nd Security Forces Squadron, Tinker Air Force Base, Okla., adopted the Dana Brown Cooper Head Start School in Midwest City, Okla., and made identity kit composite profiles for the 88 3- to 5-year-olds who attend there.

Two groups of security forces volunteers converged on the school May 9 to start making identification profiles. These profiles are individual cards with the child's picture, fingerprints and other basic identifying information.

It's a first

"This is the first time we've undertaken anything like this," said Chief Master Sgt. Charles Wallace, security forces manager. "We've been thinking about adopting a school, and I got a call from one of the parents asking for a T-ball coach.

"I thought we could mesh our needs and met with the school director. Throughout the year we plan on doing special projects like this one, help with the yard work, tutor in reading and perform stranger danger discussions with the kids," he said.

Tinker's security forces won the best large security forces award in 1999 for Air Force Materiel Command and they want to take that to Air Force-level this year.

"This community project will help us, and at the same time, we'll be able to help the school and the children," said Chief Wallace.

"I attended a recent conference and listened to retired Gen. Colin Powell, who advocated that the way to break the cycle of violence is to get to the kids at a young age so they don't grow up to be criminals, he said.

Reaching to help

"Since we're cops, we can reach these kids and maybe turn them on the right path from the beginning," he said.

Ms. Sharon Beaver, center director, said they expose the kids to people in authority such as firefighters and city police officers to give them positive examples in their lives.

"Many of our children don't have male figures in their families and they really bond with our one male teacher," she said. "I think the interaction they'll receive from the Tinker folks will really help them in the future making decisions; and at this age, it's time to bring people into their lives. If we wait until they get into school, sometimes that's too late.

"We really appreciate the Tinker Security Forces people for coming in and offering their services to us both in working with the children and the building and yard maintenance," Ms. Beaver said.

As the children got their pictures taken and were helped in putting their finger first in the ink and then in the correct area on the paper, they displayed different levels of understanding and acceptance of the process. Jarred Stewart, 5, knew he was doing this, "so my mom and dad could find me by my prints," he said.

Dajah Scott's little face was sporting a frown over the whole process until Airman 1st Class George Acres assured her it was just ink and fun to do — "like one-fingered fingerpainting." She then enthusiastically offered all the fingers he wanted.

The hardest duty

Airman 1st Class Andre McBride probably had the hardest duty of all — kid clean-up. He manned the bathroom sink and helped the children scrub all the ink off before they got it on their clothing.

In most cases, this was the first time security forces personnel had been involved with children or children not their own.

"I enjoy working and playing with my little nieces and nephews, but this is the first time I've been involved with something like this," said Senior Airman Eddie Cunningham. "I think it's really important that we get out into the community because Tinker is a part of the community."

Graduation day

Some of the children who will graduate soon ended the event with a preview of their performance to the tune of "Ball and the Jack." Resplendent in top hats, canes and beads, the little guys and gals sang and danced their way into the hearts of the squadron.

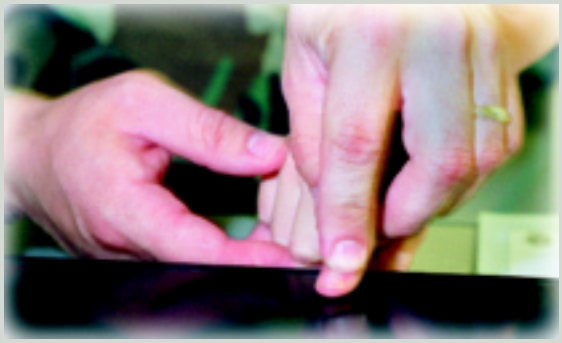
The Dana Brown Cooper Head Start School is named after an Alfred P. Murrah Building daycare giver. A plaque on the building says she led her son and "18 of her young charges through Heaven's gate" during the 1995 bombing.

Head Start is a federally funded organization, which provides such necessities as dental work, glasses and speech and hearing therapy to underprivileged children.

— Ms. Gail Kulhavy, OC-ALC Public Affairs

Photos by Ms. Margo Wright, OC-ALC

Dajah Scott changed from timid to enthusiastic during the fingerprinting process and offers all four fingers at once to Airman 1st Class George Acres, 72nd Security Forces Squadron. Squadron members photographed and fingerprinted students of the Dana Brown Cooper Head Start School as a public service for the children's parents.



The adult hands of Airman 1st Class Joe Espinoza ink tiny fingers for tiny prints that will accompany a photo of the child given to the parents as a safety measure.

Contract strengthens law enforcement

ROME, N.Y. — Applying state-of-the-art information technology to benefit local police agencies is the focus of research under a $1 million contract between the Air Force Research Laboratory's Information Directorate and SM&A Corp. of Vienna, Va.

The "Central New York Law Enforcement Network Demonstration Project," a nine-month effort, will link police agencies in the cities of Rome, Utica and New Hartford.

Also participating in the program will be the Madison County Sheriff's Department, the Oneida County Sheriff's Drug Enforcement Task Force and the Oneida County District Attorney's Office.

"Computer networking software will be made available to these agencies in an effort to measure positive effects technology can have on law enforcement," said Mr. Patrick K. McCabe, program manager in the directorate's information and intelligence exploitation division.

"The centerpiece of the demonstration system will be a computer-aided dispatch records system planned for the Utica Police Department," said Mr. McCabe. "The other participating agencies will have access to the centralized local database, as well as enhanced access to the National Crime Information System and New York State Police Information Network."

Each of the participating locations will be provided with high-technology "booking station" capabilities, including photo imaging and computerized reports and forms. Funding for the program is through the National Institute of Justice.

Air Force funds will be used for a portion of the contract designed to develop computer forensics software to assist investigators in recovering data deleted from a computer used in committing a crime.

That technology could also be transferred from the military to civilian law enforcement agencies.

— Mr. Francis Crumb, AFRL Public Affairs

Purchase agreements reduce costs

MAXWELL AIR FORCE BASE, GUNTER ANNEX, Ala. — Leading name brand workstations are now available at significantly discounted prices thanks to Air Force officials signing blanket purchase agreements with manufacturers.

The Air Force leaders signed blanket purchase agreements with Compaq Computer Corp., GTSI, Logicon Inc., and World Wide Technology, Inc. to provide quality products from well-known suppliers like Sun, IBM, Compaq, Hewlett Packard and Gateway.

All Department of Defense organizations and entities authorized to place orders using a General Services Administration schedule may use the blank purchasing agreements, which have an estimated value of $140 million and an initial term of two years.

"This is just another effort in the long line of acquisitions conducted to satisfy our customers' requirements," said Mr. Stephen Sigler, acquisitions chief for the commercial information technology-product area directorate.

The directorate negotiates contract vehicles to provide quality information technology products and services at the best price for the customer.

The workers anticipate initiating more information technology acquisitions this summer for supplies and accessories, video teleconferencing, radios and network solutions.

— Ms. Darlene Cowsert, SSG Public Affairs

Partnership strengthens acquisition process

1st Lt. C.K. Keegan, AFMC

Gen. Lester Lyles

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Gen. Lester Lyles and the Honorable Dr. Lawrence J. Delaney, Assistant Secretary of the Air Force for Acquisition, met with the Air Force's system program directors and product group managers May 2 during the semi-annual Single Managers Conference.

Gen. Lyles and Dr. Delaney stressed the need for a strong partnership between Air Force Materiel Command and Secretary of the Air Force aquisitions. They described the need for integrated strategic planning and a detailed review of acquisition career development to ensure warfighter requirements are met and people with the right skills are leading the way.

On matters pertaining to acquisition and development of their weapon system, single managers report through the designated acquisition commanders or program executive officers to Dr. Delaney. On matters pertaining to sustainment of fielded weapon system, they report through their center commanders to Gen. Lyles.

Communication at all levels and up-front planning are keys to ensuring sustainment concerns are adequately addressed during acquisition.

Successful transition from development to sustainment and maintainable upgrades to weapon systems with extended service lives depend on close cooperation with the acquisition community. Following acquisition and the weapon system being fielded, the system may be maintain for more than 50 years.

Mr. Robert Mulcahy, HQ AFMC Requirements Directorate deputy director, said "We've known for a long time that the key to delivering a sustainable system is in designing the system with the entire lifecycle in mind. "We're getting better but still have much room for improvement. Having Gen. Lyles and Dr. Delaney speaking to the single managers together for the first time was a tremendous opportunity.

"While there is still a lot of work to do in terms strengthening our partnership with the SAF aquisition office, this was a huge leap in the right direction."

— AFMC report

Robins assesses Globemaster for the long haul

By now mechanics at Robins Air Force Base, Ga.,have gotten a good look under the skin of the new C-17 Globemaster III that arrived April 12, the first of three to undergo analytical condition inspection, ACI, this year.

They describe the plane, the newest in the Air Force's heavy-lift inventory, as exceptionally mechanic-friendly. Their only problem is worrying whether or not more C-17s will come for mantenance in the future.

Two more C-17s are scheduled to arrive by July 17. The one here now was built in 1993 and the other two will be as old or older. The purpose of the ACI is to determine the need for regular maintenance.

The C-17 is due to replace the C-141, which is being phased out. The results of the ACI will partly determine whether C-17s will undergo regular depot inspection at Robins like the C-5 and C-141, or continue to be maintained at the Boeing plant in Charleston, S.C.

Many mechanics' jobs hang on the decision to be made in 2003. Maintenance workers from the C-141 directorate have been trained to work on the C-17, but if the workload doesn't come, their jobs may retire with the C-141.

The C-17 sat on the flight line last month to take advantage of the sunny weather as mechanics removed access panels and disassembled flaps to examine stress points specified in the ACI. Mr. Gary Roberson, a hydraulics specialist, was looking at flaps and spoilers.

"In some ways it's a lot easier. Somebody gave some thought about the people working on it," he said.

Mr. Roberson has been maintaining C-141s since 1979. "We're going to miss that airplane when it's gone," he said, and expressed hope that the C-17 will take up the slack. "It would be nice. It would keep people working."

Aircraft mechanic Mr. Lee Smith said the C-17's innards are "easier to get to. There are not too many small parts. It's a lot more maintenance-oriented."

Sheet metal mechanic Mr. Chris Cross said greater care must be taken in handling the craft's panels made of composite materials, one of the new features of the C-17, because they puncture more easily. It literally lightens his job.

"A 10-foot panel weighs only 78 pounds," he said, compared to more than 200 pounds for the same-sized panel of sheet metal.

"It's something new. We're taking a little more time with it," Mr. Smith said.

"It's a learning process. But from what we know already, it's a pretty good airplane. All we need is a half-dozen more," Mr. Kondrack said.

Mr. Roger Hobbs, C-17 project manager branch chief, described ACI as "an in-depth structural integrity inspection of things that might go wrong, the sort of thing that would give a heads-up to the engineering community for future maintenance."

The inspection focuses on stress points identified through a "baseline" developed from historical experience, such as wing joints, flight control hinges and engine attachment points, Mr. Hobbs said. While the C-17's basic structure is not new, "It has more composite, less metal than older airplanes."

C-17 planner Mr. Ken Wise said, "At first it's all visual, using a 10-power magnifying glass. If we see any discrepancies we bring in the engineering community which uses non-invasive techniques, like X-rays or sonograms, to confirm if there is a crack. Then a repair procedure is recommended."

The ACI is expected to take 45 days for each airplane.

— Mr. Hal McKenzie, WR-ALC Public Affairs

Senior Airman Scott Mousseau preflights a C-17 Globemaster III before take off from the Libreville International Airport, Republic of Gabon. Photo by Staff Sgt. Andy Dunaway

New System "locked on" C-5

Members of the C-5 Management Directorate's Modernization Division and the Electronic Warfare Management Directorate at Robins Air Force Base are equipping many of the Air Force's C-5 Galaxy cargo planes with a state-of-the-art defense against surface-to-air and air-to-air missiles. Although the giant heavy-lift jet normally operates out of range of standard anti-aircraft batteries, it may be at risk from terrorists wielding portable shoulder-fired missiles.

"It's something to protect the crew and to save lives, so we're anxious to get it out there," said project manager Mr. Alex Mendoza.

"During one of our campaigns one of the C-5s was locked on by a surface-to-air missile," said Roger Saucedo, division chief. "The threat was noticed. As a result there was a mandate to install the C-5 Airlift Defense System, or ADS, on all 50 C-5Bs as well as one C-5A," he said. The modification focuses on the newer C-5Bs because they are more frequently deployed in Europe and Asian theaters.

The ADS combines a missile warning system with a countermeasure dispensing system. The modernization division serves as the system program office while the Electronic Warfare Directorate is item manager.

"This system provides surface-to-air or air-to-air warning and protection. It detects incoming missiles and dispenses decoys to distract the missile," Mr. Saucedo said.

Mr. Mendoza said each craft is equipped with 12 flare dispensers armed with six flares each, four under each wing and four under the nose. The system's sensors detect the missile while its software identifies the nature of the threat and cues the dispensers to shoot flares automatically to counter it.

"Every threat has a different signal, a different algorithm we go by to determine the threat," said Mr. Mendoza. "The software detects what kind it is and how the flares will be dispensed to avoid that threat. We're always working to improve the system. It gives us better threat protection and avoids false alarms."

The work is contracted to Boeing Aircraft Company from its plant in Shreveport, La. So far they have modified 35 aircraft with 16 to go. The work should be complete March 2001.

— Mr. Hal McKenzie, WR-ALC

Tech. Sgt. Cary Humphries

Airman 1st Class Andre Raymundo directs a U.S. Air Force C-5 Galaxy transport aircraft to a parking spot on the ramp at Hoedspruit Air Force Base, South Africa. The Galaxy is deliveried cargo, personnel and two HH-60 Pave Hawk helicopters from the 41st Rescue Squadron, Moody Air Force Base, Ga., for Operation Atlas Response.

Survey highlights strengths, weaknesses

Leading Edge aims to boost readership

The *Leading Edge* staff is aiming to boost readership and make distribution more equitable across the command as a result of a recent readership survey.

The survey, mailed in January to a stratified random sample of 6,000 people throughout the command, highlighted several awareness and distribution problems, and validated the command magazine's content.

Key findings

One of the key findings indicated about half of the people in the command (49 percent) read the magazine. Two-thirds of the nonreaders said they don't have access to the magazine (48 percent) or are unfamiliar with it (19 percent).

"The bad news is half the people in the command aren't reading *Leading Edge*," said Ms. Libby VanHook, executive editor for the magazine. "The good news is that now we know why they aren't reading it, and we can take steps to make the magazine more accessible."

Distribution concerns

The *Leading Edge* staff knew the closing base publication distribution offices last year would impact distribution, but the survey made the impact quantifiable.

"Based on survey responses, we took a second look at where we're sending the magazine, to make distribution more equitable," said 1st Lt. C.K. Keegan, *Leading Edge* managing editor.

Magazines will be evenly distributed throughout the command at a rate of one magazine for every eight people. Bases receiving more than their fair share of the magazines will receive fewer copies, while bases that were not getting enough will receive more.

On-line access

While the staff is aiming to make the paper copies of the magazine more easily accessible, they also want to encourage readership of the online version of the *Leading Edge*.

Though 95 percent of respondents report that they have Internet access, 86 percent of survey respondents were unaware that the *Leading Edge* is available on-line at http://www.afmc-mil.wpafb.af.mil/HQ-AFMC/PA/leading_edge/. There is also resistance to reading electronic publications: 39 percent of respondents said they wouldn't read the magazine if it was only available on the Web.

"Based on survey results, there is a continued need to serve the AFMC community by printing a conventional magazine," said Col. Donna Pastor, AFMC's director of public affairs. "But since we can't print enough copies for everyone to have their own, the electronic version is a way for us to reach more people with little or no added cost."

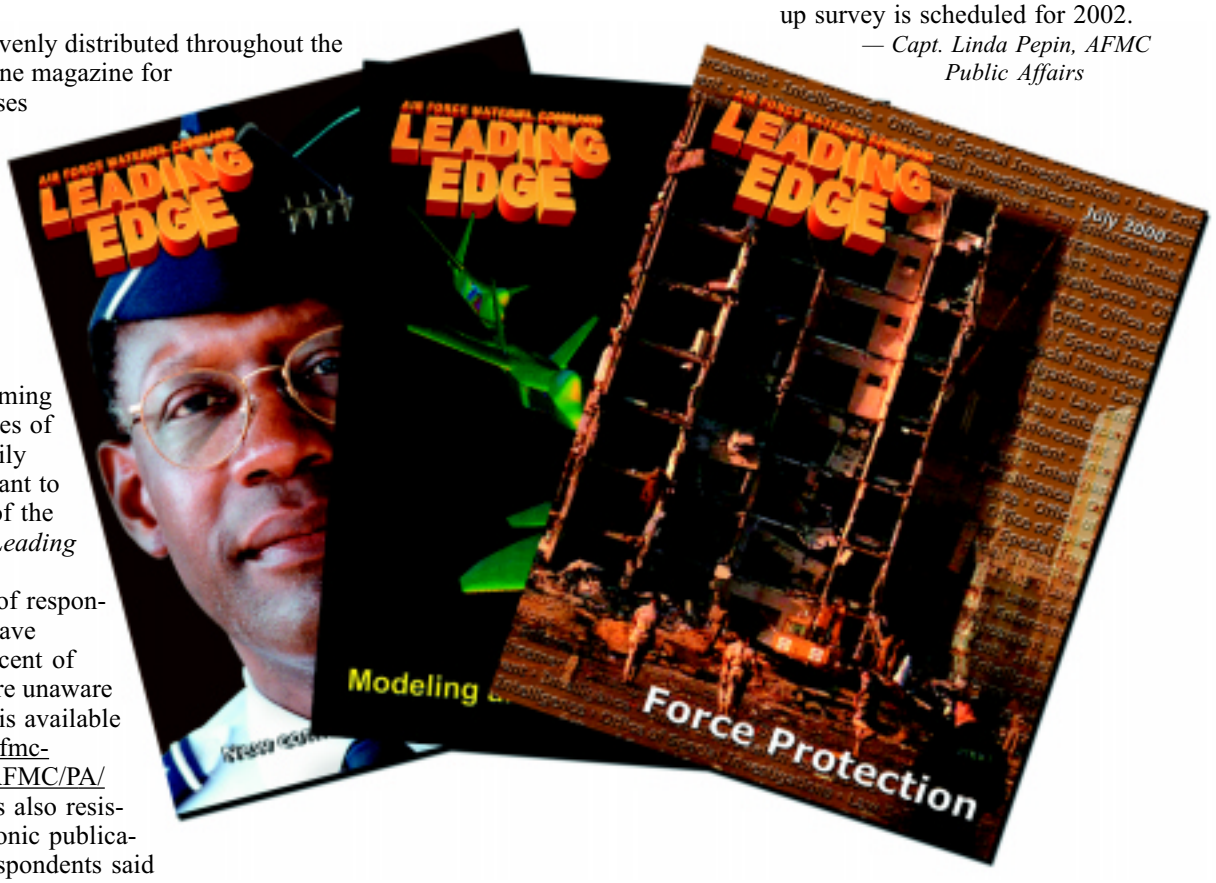
Keeping you informed

A positive survey finding was that 94 percent of the readers said *Leading Edge* is effectively keeping them informed about what is happening in AFMC. Cover stories and news briefs are the most popular, and readers would like to see more human interest stories and more stories from the installations and support business area.

"The *Leading Edge* is one of the AFMC commander's primary communication tools," said Ms. VanHook. "We want to make sure we keep readers' interest by printing stories they find interesting and useful." For example, the December issue is programmed to be a collection of human interest features highlighting the unique individuals who help accomplish AFMC's mission.

This is the first scientific readership survey in the *Leading Edge*'s history. The survey's confidence level is 95 percent, with a margin of error of plus or minus two percent. A follow-up survey is scheduled for 2002.

— Capt. Linda Pepin, AFMC Public Affairs



Ms. Lorna Estep

MSG tackles ever-changing technologies

Progress is a nice word. But change is its motivator.

In keeping pace with the ever-changing world of technology, many changes are in progress for the Materiel Systems Group (MSG), headquartered at Wright-Patterson Air Force Base, Ohio. Falling under Electronic Systems Center, Hanscom Air Force Base, Mass., MSG's mission is to "deliver agile combat support information solutions enabling warfighters to achieve military success."

"We are preparing to make some dramatic changes in terms of our focus," said Ms. Lorna Estep, executive director. "We've created a new MSG vision and have developed a detailed roadmap on how to achieve that vision."

That vision focuses on providing value to customers needing current information systems. MSG's objectives are to support the Air Force vision of the Expeditionary Aerospace Force by providing rapid response and delivery of systems and support to the engineering and acquisition community for weapon systems, interoperability and decision support products for the warfighter.

"One of the changes we're making is to look closer at taking advantage of commercial systems," said Ms. Estep. "We're looking at emerging technologies like collaborative tool sets, data warehousing, data mining and flow management systems."

One of the difficulties of using commercial systems is that many of these applications are written to support customers motivated by profit, while the military needs to use processes and decisions that are mission related.

"We are trying to learn how to leverage these commercial tools, even if we cannot use 100 percent of the commercial capability because of our mission differences," she said. "We've learned some valuable lessons on using commercial products and we are applying those lessons with our current modernization efforts.

"A big advantage is in saving developmental costs," said Col. Dave Bentley, business information director. "The commercial world is doing development work in order to satisfy their business base, and we can leverage off that work."

A disadvantage is that every 18 months or so, the commercial process evolves into the next release adding more functionality and features. Every time that happens, it can drive integration issues back into the process.

Because of system integration and time to deployment issues, current trends are moving towards delivering smaller systems that are easier to change and manage.

Using smaller systems has other advantages as well. "What we're looking at doing is taking a chunk of capability and delivering it in a shorter period of time," said Ms. Estep, "then continually provide additional capability over time."

MSG's Information Technology Application Center, ITAC, provides a premier test facility to share resources, partner with industry and bring in new technology to integrate it with Air Force requirements. Located at Wright-Patterson, the lab is a hub for new technology and innovation.

"The ITAC enables rapid understanding and implementation of state of the art technologies," said Ms. Rita Wozniak, technical division manager, "providing an isolated testing area, where current operations are not impacted."

Recent projects tested in the ITAC include the initial Microsoft Windows 2000 Review, Information and Resources Support System Legacy Y2K Review, and the AFMC Intranet.

Members of the MSG logistics community recently visited a major retailer in the local area to observe the systems supporting their business activities. "Some of the things they had done with data repositories and network storage solutions are applicable to what we do," said Ms. Estep.

"We went to the technology companies the retailer used in their technical infrastructure and discussed our needs with them," she said. "These companies agreed to supply technology and engineering talent for demonstration in the ITAC. If the demonstration is successful, then this capability will be purchased to support our needs.

"What we've been doing this past year is positioning MSG as an organization to work well with industry and support our customers in delivering solutions to thier needs, and developing our workforce to be familiar with new technologies," she added.

Change means movement, and MSG is actively progressing towards the new millennium with all its technological challenges.

— Ms. Libby VanHook, AFMC Public Affairs

Just the facts

Materiel Systems Group, a component of Electronic Systems Center, Hanscom Air Force Base, Mass., and located at Wright-Patterson Air Force Base, Ohio, delivers agile combat support information solutions that enable the warfighter to achieve military success.

Responsibilities

- Helps customers achieve their Joint Vision 2010 objectives through acquisition and technical expertise.
- Shapes and implements DOD processes for acquisition, research, development and renewal of integrated combat support systems.
- MSG also develops partnerships and shares investments with customers, other government agencies, industry and academia, providing leading edge information services and technologies, maximizing DOD operational effectiveness and efficiency.
- As high performing, agile and learning organization, MSG employs 550 personnel. More than 1,400 contractors provide direct support to MSG.

Budget

$298.3 million

Web address

http://www.msg.wpafb.af.mil/

Air Force produces commercials to boost retention

Nearly 60 people from a Hollywood film crew recently wrapped up shooting scenes at Edwards Air Force Base, Calif, Eglin Air Force Base, Fla., and Hurlburt Field, Fla., for an upcoming series of four Air Force recruiting and retention commercials.

Air Force Chief of Staff Gen. Michael Ryan has highlighted recruiting and retention issues as key challenges facing the Air Force. He discussed the issues in a recent visit to Europe.

"These are people issues," Gen. Ryan said. "For us, retention is the issue. All of the wonderful equipment out there is simply machinery if we don't have the best people in the world to operate it."

In an effort to communicate the critical importance of retention and recruiting to both Air Force members and the American public, the Air Force contracted a professional ad agency, an Academy Award-winning movie director and an experienced Hollywood production crew to shoot the advertisements. The commercials will begin airing this July.

The production crew selected the AFMC sites for a variety of reasons, including: support of Air Force missions; large number of personnel available for filming: selection of airframes; and ideal weather. The crew shot more than 15 scenes at Eglin, and several more with Air Force Special Operations Command people.

One of the biggest scenes involved a 120-troop deployment scenario shot at both the Eglin Readiness Center and with a C-17 at King Hangar. Other scenes at Eglin included: a four-ship fly-by of 33rd Fighter Wing F-15s at the All Veterans' Memorial while Honor Guard members saluted the flag; a change-of-command and pinning ceremony at the Air Armament Museum; and an Air Force wedding at Chapel Two.

At Edwards, scenes captured included: a KC-10 tanker refueling; a B-2 Spirit and two F-117 A Nighthawks; ground shots of the F-22 Raptor; and F-16 Fighting Falcons and F-15 Eagles flying over the Mojave Desert.

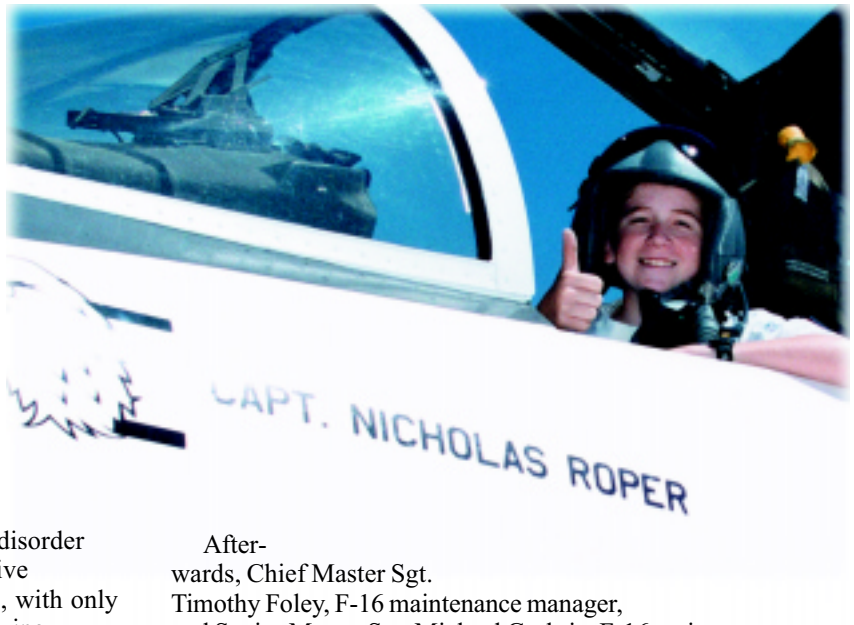
"We emphasized people," said Mr. Bill Coker, assistant director for the $4-million project. "You often see hardware (in past commercials) because it's exotic and exciting. But what we're trying to show is the team spirit and sense of adventure in what the rest of the Air Force does.

The project came together quickly. Secretary of the Air Force for Public Affairs picked the shoot locations April 28 and the film crew first arrived at Eglin April 30 to begin preliminary scouting. They did not pick the scenes that would be shot at Eglin until they returned to begin filming May 18.

"We really appreciate the hospitality and flexibility shown by the people supporting this effort," said Brig. Gen. Ron Rand, director of Air Force Public Affairs. "This has been a huge effort and we expect significant payoffs in terms of telling the Air Force story."

— Compiled from reports by 1st Lt. Craig Goolsby, AAC Public Affairs, and Mr. Ray Johnson, AFFTC Public Affairs

Edwards helps make dream come true



An ill youngster had his dream come true at Edwards Air Force Base, Calif., recently as he climbed into the cockpits of an F-16 Falcon and an F-15 Eagle.

Nicholas Roper, 15, has cystic fibrosis, a genetic disorder that affects his respiratory, digestive and reproductive systems. Currently, there is no cure for the disease, with only about half the children afflicted with the disorder living beyond age 20. Few live beyond 35.

Nicholas's nurse, Ms. Joanne Fierro from Children's Hospital of Orange County, Calif., said Nicholas's sister, Amanda, had the same illness and died three years ago at 16.

Ms. Fierro's daughter, Val, an airman assigned to the Edwards finance office, learned of the boy's condition and wanted to help grant his wish – sitting in an Air Force fighter aircraft.

"I heard they had an inactive F-16 here and asked around if it was possible for Nicholas to see it and possibly sit in it to have his picture taken," the younger Ms. Fierro said. "So I went to my first sergeant, Master Sergeant (Norman) Fawcette, to see if he could help."

Nicholas's tour began at the 416th Flight Test Squadron, where he sat inside an F-16. He also was shown the jet's control panels and how pilots communicate with the tower.

His response: "This is so cool."

Afterwards, Chief Master Sgt. Timothy Foley, F-16 maintenance manager, and Senior Master Sgt. Michael Guthrie, F-16 maintenance superintendent, drove the boy along the flight line to watch two F-16s taking off simultaneously. As the fighters taxied, Nicholas saluted smartly to the pilots just before they took off.

He was then escorted to the 445th Flight Test Squadron where an F-15 with his name on it awaited him. The words "Capt. Nicholas Roper" were written on the Eagle's side, thanks to the jet's crew chief, Staff Sgt. James Hernandez.

Maj. John Deems, assistant operations officer, showed Nicholas the plane's control and explained what the systems are and how they work.

"We're like a big family. It's nice to take someone under our wing and help them out," said Chief Master Sgt. Tim O'Hearn, F-15 maintenance manager. "It's been a while since we had the opportunity to participate in such a program. We look forward to participating in future opportunities."

"It was great," Nicholas said. "I had a lot of fun."

— 1st Lt. Stacy Vaughn, AFFTC Public Affairs

Edwards repairs LANTIRN pods for field units

Being aware of other bases operational challenges is one thing, being able to help is another.

The Air Force Flight Test Center, Edwards Air Force Base, Calif., like any other major military organization, has workload concerns of its own. But when possible, it can help swamped field units.

One example is the 412th Component Repair Squadron Sensors Element, tasked with maintaining and testing Low Altitude Navigation and Targeting Infrared for Night pods, LANTIRN, can do in-depth LANTIRN repair work for operational bases.

In a recent example a pod from Hill Air Force Base, Utah, had created problems for three years. "It wouldn't last more than five hours of flight time before breaking down," said Master Sgt. Stephen Couture, LANTIRN section shop chief at Hill. "We just didn't have time to do a thorough job of repairing it for good."

Enter the 412th's sensor shop. "Because of our unique working relationship with engineers from LANTIRN's contractor, Lockheed-Martin, we have enhanced repair capabilities that other bases do not," said Master Sgt. Kevin Kempf, assistant sensors shop chief.

The 412th CRS crew discovered seven faulty components in the pod, one in the nose section that required depot-level work. Once repairs were made, the pod was flight-tested and returned to Hill.

The result? "Flawless," Sgt. Couture said. "Equipment that had worked properly for a only a few hours at a time before breaking down now has flown more than 50 hours without a single problem. Plus, Edwards reduced a backlog for the Hill shop, taking pressure off of them."

Hill wasn't the only one that benefited from the job. "The younger troops, who have never been to an operational base, got a chance to see how a test center can contribute to the warfighter," said Sgt. Kempf.

Because of LANTIRN's obvious importance throughout the field, the 412th's sensors element has been tasked several times to make pod and associated equipment repairs. Other bases they've helped include Aviano AB; Kelly AFB, Texas; Luke AFB, Ariz.; Royal Air Force Lakenheath, England. Robins AFB, Ga.; Wright-Patterson AFB, Ohio.

— Mr. Ray Johnson, AFFTC Public Affairs

Never swim when danger flags are flying

"Each man is a hero and oracle to somebody," said Ralph Waldo Emerson. Mr. George Hilyard is a hero to many.

It all started March 31 when Mr. Hilyard, a plans specialist at Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio, took his wife, Brenda, and 9-year-old daughter Ashley, to the beach near Fort Walton Beach, Fla. When they arrived, he noticed red flags were posted indicating dangerous swimming conditions — strong currents and riptides were prevalent.

"It was disappointing to get to the beach and be told you could only enter the water up to your knees, but we decided to stay and enjoy the sunshine," Mr. Hilyard said.

Not everyone at the beach that day heeded the warning. As Mr. Hilyard and his family relaxed on the beach, he was stirred by cries for help from the water.

Lives in danger

A 7-year-old boy, was on a boogie board when he was caught in a riptide and couldn't get back to shore. The boy's father had gone into the water to get him, but got caught in the strong surf himself. The current was so strong that the pair was being pulled out to sea.

A teenager, who was nearby on a small surfboard, paddled to the scene and attempted to save the man and his son, but was knocked off by a wave and also became trapped in the riptide. Watching this unfold, and with no lifeguard in the area to call, Mr. Hilyard and four other bystanders ran to the water to assist, despite the possibility that they could become victims.

"It never crossed my mind that I could end up in trouble while trying to help others," said Mr. Hilyard. "But, once you get in there, and you're in trouble, you think 'this is really stupid.'"

As the others assisted the man and his son, Mr. Hilyard noticed a woman closer to shore caught in the riptide and being pulled under the water and out to sea. He ran into the strong surf and grabbed the woman's hand. Using sheer strength, he pulled her to the surface and safely onto land.

Caught in the riptide

Mr. Hilyard then ran back into the water to assist the others, became trapped in the riptide himself and was swept out to sea. As he was fighting the current, Mr. Hilyard tried to swim parallel to shore to reach calm waters, as he had been taught when he learned to swim.

"But it wasn't working at all," said Mr. Hilyard. "The tide continued to carry me away from shore. I knew I was in trouble. The water hadn't warmed up yet, and it was wearing me down quickly. I was exhausted from the effort and was constantly being pushed under." Every new wave that came along slammed into him, and he found himself swallowing large amounts of salt water.

The final moment

In what could have been the last time he went under, he was grabbed by a lifeguard and strapped to a life preserver board. While emergency medical technicians attended to him, his wife of 25 years, Brenda, who checked her watch before he went in, told him he had been in the water for more than an hour.

"I thought it had been about five minutes," he said. "I simply can't remember what happened during that time, even today."

His wife told him she had kept busy trying to keep their daughter from going in after him.

He was taken by ambulance to Fort Walton Beach Medical Center, where he was treated for irregular heartbeats, X-rayed and given tests and medication. The attending physician told him he was lucky to be alive.

"I didn't realize how much it had affected my family until that night," said Mr. Hilyard. "I was having kidney pain and was restless, so I was on the sofa so as not to disturb my wife. In the middle of the night she came out and asked me to join her, and I saw she had been crying."

Reflection

He's asked himself numerous times since that day if knowing that he could have lost his life, he would do it again.

"I honestly believe I would," he said. "If the situation ever came up again, I would do it again. Somebody has to, you can't just stand by and let something happen to another person. That's not the way people are supposed to act."

The joke in Mr. Hilyard's office is if he is planning any beach vacations. "Actually, we are taking a family vacation to Hilton Head this summer," he said. "But I may not get in the water."

— Ms. Libby VanHook, AFMC Public Affairs

Water safety

* Never swim alone.
* If you get a leg cramp, try not to panic. Float on your back, and bring your leg to the surface. Rub the muscle with both hands. Try swimming slowly back to shore.
* A stomach cramp is usually caused by swimming hard in cold water on a full stomach. If the pain is very bad, try to keep your head above water and shout for help. If it is not too severe, try floating on your back and take slow deep breaths to help relax the muscles. You can also try bending your knees to your chest, and then extending them again.
* If you are not sure if an area is safe for swimming, don't swim there.
* Never swim right after a meal, allow about an hour for your food to digest.
* Never swim when danger flags are flying.
* Check whether the tide is going in or out.
* Don't swim near piers or breakwaters. The currents here may be strong, even for the best swimmers.
* Stay clear of boats, they may not see you.
* Swim parallel to shore. If you swim out too far, you may be too tired to swim back.

— Information compiled from internet sources

All the right moves

BROOKS AFB, Texas - While he has more deceptive moves than any wily NBA player, Master Sgt. Bruce Lewkowski never seems to break a sweat. He is as cool and calculating as the western TV hero who inspired him to overcome life's stress with chess: Paladin in "Have Gun, Will Travel."

"What got me interested in the game was Richard Boone's character, Paladin. He had a white knight chess piece mounted on his holster," says the 47-year-old medical technician, formerly with the AFRL Human Effectiveness Directorate's Biodynamics and Protection Branch.

Sgt. Lewkowski was fascinated with the 1950s-era drama in which Paladin applied many chess strategies to resolve often life-threatening situations.

At age 10 the Dallas, Texas, native acquired his first chess set, joining countless millions who have played this centuries-old game. Originating in India in the 2nd century A.D., chess spread throughout Asia. It was introduced to Europe by Arab invaders.

Napoleon Bonaparte and Humphrey Bogart are among the game's more renowned players. Russian Grand Master Gary Kasparov has been the reigning men's world chess champ since 1985. Hungary's Zsursu Polga has been the women's world champ since 1996. The U.S. has produced only one world champ: Bobby Fischer who defeated the Soviet Union's Boris Spassky in 1972 for the title.

Sgt. Lewkowski is not yet a chess master, but is among the top 25 percent of U.S. players as a class "B" competitor with 1,765 rating points. By comparison, Bobby Fischer is considered the greatest grand master with a rating of 2,785.

"Chess is a lot like life. To be successful, you have to do some work, build upon it and learn," Sgt. Lewkowski said. A player's skill level greatly depends on applying collective experiences gained through study, practice and competition.

In retrospect, Sgt. Lewkowski regrets not having listened to fellow high school player Ronald Henley's advice. "I was the first person to lose a game to this kid," recalls Sgt. Lewkowski who in 1971 seldom lost games before playing Henley. "He gave me a book, *Basic Endgames*, for me to study. I didn't study it until I was in my 30s." Today, Henley is a grand master.

Grand master is the top ranking, followed sequentially by international master, senior master and master. Collectively, these rankings represent only one percent of players in the world. Below master level is the top five percent Expert class, top 20 percent "A" class, top 25 percent "B" class, top 50 percent "C" class, followed by "D" and "E" players.

"There are a few hundred grand masters in the world. It takes a lifetime to get to that level," Sgt. Lewkowski noted. In 1980, he learned how wide the gulf of experience and skill is between a class "C" player and one of the world's top competitors.

At the U.S. Open Chess Championships in Atlanta, Sgt. Lewkowski played Romanian Grand Master Florin Georgha in the tournament's opening round. In previous play against Mr. Bobby Fischer, Georgha had the same number of wins, losses and draws against the future world champ.

"I was in shock when I was paired with him by luck of the draw. I lost on the 17th move," Sgt. Lewkowski admits. So great was Georgha that by the tenth move he had taken the initiative away from Sgt. Lewkowski who had the opening move. "I resigned before the checkmate came. What I learned from him was to be more patient. I tried to force something early with my opening strategy. I also learned not to let somebody's credentials intimidate me."

The mental game, however, is only half the battle. Like life, preparation is key to success in chess. "You try to perfect an opening repertoire that includes several good strategies. Then you work on the 'middle game' involving tactics and strategy where you try to take advantage," Sgt. Lewkowski said. The all-important 'end game' is the final piece in solving the puzzle of chess that has several hundred thousand potential moves. The ultimate objective is to put the 'king' in a threatened position where it can not move without capture.

Checkmating an opponent is one way to win. "You can claim victory by proving an opponent has not made the exact number of moves in the allotted time."A standard timed tourney game is 45 moves in two hours. Players are required to write down each move. The game has faster variations including 30-minute 'quick chess' in which players must make all their moves or lose, and five-minute 'blitz tourney chess.'

Besides marrying Rose, Sgt. Lewkowski's other great move outside chess was joining the Air Force in 1976. By 1983, he had become the U.S. Air Force – Europe regional chess champ for Central Europe.

— Mr. Rudy Purificato, 311th HSW Public Affairs

USAFSAM recognized for community support

BROOKS AIR FORCE BASE, Texas — The U.S. Air Force School of Aerospace Medicine's Department of Public Health, or USAFSAM, has been named the 1999 recipient of the prestigious Public Service Excellence Award for the organization's extensive community service contributions. USAFSAM received the honor during a Capitol Hill ceremony May 1 in Washington, D.C., as part of National Public Service Recognition Week.

Since 1985, the Public Employee Roundtable, PER, has sponsored the awards program to recognize groups and individuals whose volunteer community outreach efforts demonstrate innovation, quality and effectiveness. More than 180 organizations nationwide competed for PER public service awards in the federal, state, county, city, intergovernmental and international categories.

"It's the first time we've competed for the award. It's recognition of a lot of hard work involving about 200 people from the school," said Capt. Jim Poel, USAFSAM's chief of occupational health.

USAFSAM earned the honor on the strength of volunteer work by students and faculty who supported many community activities. USAFSAM contributed volunteer labor to the San Antonio Metropolitan Ministry Shelter, Habitat for Humanity, the San Antonio Children's Shelter, KISS Radio's food drive for the Little Church of LaVillita, the San Antonio 'Basura Bash' river cleanup, the Converse Animal Shelter, KLRN's Public Television "Blazing Gavels" fundraiser, the South Texas Health and Medicine Expo, and more.

— Mr. Rudy Purificato, 311th HSW Public Affairs

Robins supplies innovation, imaginative thinking

ROBINS AIR FORCE BASE, Ga. — Nine Air Force Materiel Command nominees and one Air Combat Command nominee from Robins earned Commander-in-Chief's Installation Excellence Special Recognition Awards. The AFMC nominees included eight individuals and one organization, the Warner Robins Air Logistics Center Avionics Management Directorate.

The command nominees competed for the Air Force-wide awards, which are based on achievements, innovation and imaginative thinking.

The winners will receive certificates signed by the Secretary of Defense under the DOD-wide recognition program that honors top achievers in all branches of the military. This year, Robins submitted 35 nominations to AFMC, which sent 16 forward for Air Force level competition.

Winners are: Capt. Kyle D. Brown, chief, housing division; Master Sgt. Danny K. Butler, structural craftsman; Mr. William D. Fowler, chief, infrastructure support; Mr. Ronnie E. Glore, industrial controls mechanic; Airman First Class Henry L. Ruelas, communications system control specialist; Master Sgt. David C. Cathcart, airborne sensor manager; Mr. Jackie R. Ringley, electronics engineer; and Mr. Robert Sargent, natural resources manager.

— Mr. Chris Zdrakas, 78th ABW Public Affairs

Rome's Kaveney earns electrotechnology award

ROME, N.Y. — Mr. William J. Kaveney, manager of technology transfer for Air Force Research Laboratory Information Directorate, has been named recipient of the 1999 Electrotechnology Transfer Award from the Institute of Electrical and Electronics Engineers, USA.

The annual award recognizes an individual whose contributions in a key government or civilian role led efforts to transfer federal or state-sponsored developments in advanced electrotechnologies to successful commercial sectors opportunities.

— Mr. Francis Crumb, Rome Public Affairs

Hanscom dog at the "top" of his game

HANSCOM AIR FORCE BASE, Mass. — The first DOD Worldwide Invitational Canine Trials where held recently at Lackland AFB, Texas, and a Hanscom dog handler and his dog took first place in a major category.

Senior Airman Albert E. DeMello III and Robby, a military working dog, both members of the 66th Security Forces Squadron finished first over all in the explosive detection category at the trials.

Fifty-eight military working dog teams competed from all services in three-days of trials.

The dog teams were tested in explosive detection, drug detection, scouting, building search, handler protection, and tactical obedience and confidence course.

"We really tested the capabilities of these dogs, and they responded," said Master Sgt. Gary Bowling, judge of the explosive detection event. "It is important that bomb dogs be at the top of their game at all times, because they often help protect the president and vice president."

Airman DeMello, an explosive detector dog handler and patrolman, has been working with Robby for the past 14 months and during that time the duo has been on seven Secret Service missions in support of the president, vice president, first lady, presidential candidates and foreign dignitaries.

Robby is an 8-year-old Belgian Malinios and has been on the 'force' for the past 6 years.

(Some information was contributed by Senior Master Sgt. Denton Lankford, Lackland AFB, Texas)

— Senior Airman Jason Ide, ESC Public Affairs

Lockheed Martin test pilot wins Yeager Award

EDWARDS AIR FORCE BASE, Calif. — In the flight test world, there is certainly no pilot more famous than retired Brig. Gen. Chuck Yeager.

So, its fitting that an annual honor given to those who dedicate a lifetime career to the progress of aerospace technology is named after the man who broke the sound barrier. And it seems only appropriate that a pilot testing the Air Force's next-generation fighter – the F-22 Raptor – won the Yeager Award this year.

Mr. Jon Beesley, a Lockheed Martin Aeronautics Company test pilot, was recognized recently for his work on the F-22, F-16 Fighting Falcon and F-117A Nighthawk by the Engineers Council, a group that promotes work in education, technology and public service.

Mr. Beesley's part in developing these aircraft began almost 20 years ago, when he joined the then-secret F-117A program as one of the fighter's initial Air Force test pilots.

The Nighthawk is the world's first operational aircraft designed to exploit low-observable stealth, or radar-evading, technology. Beesley lauds its ability to slip in, eliminate a target and slip out "before anyone knows what happens."

While working on the stealth fighter when it was still shrouded in secrecy, Mr. Beesley remembers his then commander, Lt. Col. Skip Anderson, describing the impact that stealth would have on the future of air warfare.

"He (Lt. Col. Anderson) said, 'the next big challenge will be to make a stealthy airplane with all the maneuvering capabilities of the best current-generation fighters.'" Mr. Beesley said. "The F-22 Raptor fulfills that … and more."

After retiring from the Air Force in 1986, Mr. Beesley joined General Dynamics, which later became part of Lockheed Martin, as a test pilot for the F-16 program. And in the early 1990s, he flew the YF-22 during the demonstration validation phase of the advanced tactical fighter program. Now he is one of fewer than 10 Air Force and contractor pilots who push the Raptor during an intensive testing and evaluation phase here as part of the F-22 Combined Test Force.

Mr. Beesley said he had the good fortune to work with the Raptor's designers early on in the program. Plus, he has watched "very dedicated" engineers solve the problems of making the F-22 do things that past fighters have been unable to achieve.

"The persistence and innovation of these smart guys have given us the Raptor," he said, adding that the F-22 is on course to make warfare "decidedly unfair" for any aggressor. "That's exactly the dream that we set out to fulfill."

And all along he has had the best seat in the house – inside a cockpit.

— Mr. Ray Johnson, AFFTC Public Affairs

Edwards, Air Force Museum capture Air Force web site awards

WRIGHT-PATTERSON AIR FORCE BASE, Ohio - Edwards Air Force Base, Calif., and the United States Air Force Museum here took first and third places, respectively, in the Air Force 5-star award for outstanding public web sites.

The two sites competed against 40 other nominees from around the blue-suit community for the first quarter 2000 award. The Air Force Chaplain Service site captured second place.

To view the Edwards site, visit www.edwards.af.mil. To view the museum site, visit www.wpafb.af.mil/museum

Sites were cited for how well they offer their audience a focused resource for finding out about their organizations and their missions, uniformity and overall effectiveness.

Nominations for the second quarter award are due by June 30 and can be made on Air Force Link at www.af.mil/5star.

AFMC nominees bring home lion's share of Air Force-level EEO awards

Air Force Materiel Command nominees won nearly half the categories in this year's Equal Employment Opportunity awards program, bringing home five of the 11 Air Force-level awards.

The Distinguished EEO Awards Program recognizes individuals annually for outstanding support and contributions to the EEO and affirmative action programs, said AFMC personnel officials.

Winners will receive award certificates and a letter from Secretary of the Air Force F. Whitten Peters along with engraved plaques.

AFMC people captured the following categories:

Commander Action — Lt. Gen. Robert F. Raggio, Aeronautical Systems Center commander, Wright-Patterson Air Force Base, Ohio. Gen. Raggio's notable achievements include increased placement of minority female military members into key leadership positions and a strong personal emphasis on EEO and affirmative action programs and initiatives.

Supervisory Action — Ms. Mary E. Newsome, Air Force Research Laboratory Munitions Directorate, Eglin Air Force Base, Fla. As chief of the Human Resources Branch, Ms. Newsome spearheaded a yearlong effort to recruit engineers from EEO and AAP categories. Her recruiting effort was so successful it's being adopted as the model for the rest of AFRL to follow.

Complaint System — Mr. James M. Shelton, equal employment specialist, Hill Air Force Base, Utah. Mr. Shelton accumulated a 93 percent EEO resolution rate for the year and has been a primary contributor to the 90 percent resolution rate the base has enjoyed since 1994.

This past year Mr. Shelton mediated more complaints than any other counselor in the Air Force.

Special Emphasis (Asian American/Pacific Islander Employment Programs) — Ms. Leonila Q. Marcelino, contract monitor and functional area evaluator, Edwards Air Force Base, Calif.

Ms. Marcelino was recognized for developing a statistical database used to analyze career paths for Asian American/Pacific Islanders and then using that database to realign imbalances in the system.

Selective Placement Program — Mr. Scott A. Clausen, AFMC, Wright-Patterson. Mr. Clausen directs the command's computer accommodations program, which is designed to assist employees with hearing, visual, speech, and mobility impairments or musculoskeltal disorders. He oversees five support contractors and is responsible for supporting nearly 1,200 AFMC employees with disabilities.

Mr. Clausen, who was born with cerebral palsy, has been instrumental in expanding the outreach and success of this program because of his keen insight and understanding of the benefits of this assistive technology.

— Capt. Mike Kelly, AFMC Public Affairs